DOCUMENT RESUME

ED 344 347 EA 024 074

AUTHOR	Alsalam, Nabeel; And Others
TITLE	The Condition of Education, 1992.
INSTITUTION	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	ISBN-0-16-037953-9; NCES-92-096
PUB DATE	Jun 92
NOTE	446p.; For 1991 edition (in 2 volumes), see ED 330 121-122.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110)
EDRS PRICE	MF01/PC18 Plus Postage.
DESCRIPTORS	Academic Achievement; Access to Education; Curriculum; *Educational Assessment; Educational Environment; Educational Finance; Educational Quality; *Educational Resources; Educational Trends; *Elementary Secondary Education; Enrollment; Ethnic Distribution; Government Publications; Institutional Characteristics; Outcomes of Education; *Postsecondary Education; *School Demography; *School Statistics; Student Characteristics; Surveys; Tables (Data)
IDENTIFIERS	*Indicators

ABSTRACT

The current status of education for 1992 is presented in the form of education "indicators"--key data that measure the health of education, monitor important developments, and show trends in major aspects of education. The 60 indicators have been divided into 6 areas: (1) access, participation, and progress; (2) achievement, attainment, and curriculum; (3) economic and other outcomes of education; (4) size and growth of educational institutions; (5) climate, classrooms, and diversity in educational institutions; and (6) human and financial resources of educational institutions. The report includes the text, tables, and charts for each indicator plus the technical supporting data, supplemental information, and data sources. This edition integrates indicators on issues in elementary and secondary education with those on issues in postsecondary education to reflect the continuity of educational experiences. New indicators include the following: (1) enrollment below modal grade for language minority students; (2) international comparisons of mathematics and science performance; (3) international comparisons of educational attainment; (4) course-taking in academic, vocational, and personal use education among high school graduates; (5) programs and services offered by schools; (6) crime in the schools; (7) federal support for education; and (8) international comparisons of public expenditures of education extended to higher education. (MLF)

ED344347

THE CONDITION OF EDUCATION

1992

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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THE CONDITION OF EDUCATION
1992

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For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-037953-9

U.S. Department of Education
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National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

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Suggested Citation

U.S. Department of Education, National Center for Education Statistics. *The Condition of Education, 1992*. Washington, D.C.: 1992.

June 1992

Editor: Mark Travaglini
Cover design: Phil Carr

The National Center for Education Statistics (NCES) gathers and publishes information on the status and progress of education in the United States. The federal authorization for these activities (with antecedents to 1867) states that the Center will "collect, collate, and from time to time, report full and complete statistics on the condition of education in the United States." The Hawkins-Stafford Elementary and Secondary School Improvement Amendments of 1988 (Public Law 100-297) mandate an annual statistical report on the subject from the Commissioner of Education Statistics. This 1992 edition of *The Condition of Education* responds to the requirements of law.

Organization. The condition of education "indicators"—key data that measure the health of education, monitor important developments, and show trends in major aspects of education—are divided into six areas: (1) access, participation; and progress; (2) achievement, attainment, and curriculum; (3) economic and other outcomes of education; (4) size and growth of educational institutions; (5) climate, classrooms, and diversity in educational institutions; and (6) human and financial resources of educational institutions. The report includes the text, tables, and charts for each indicator plus the technical supporting data, supplemental information, and data sources.

This edition of *The Condition of Education* reflects some important changes from recent years. The format of *The Condition of Education* is designed to present statistical information in an accessible manner for a general audience. The major innovation of this edition is the integration of indicators on issues in elementary and secondary education with those on issues in postsecondary education to reflect the continuity of educational experiences. The essence of each indicator is on two facing pages. On the first page, the results are highlighted and a table presents the data. On the second page, one or more charts give a graphic representation to the major implications of the indicator. In addition, there is a discussion preceding each group of indicators relating them to one another. As in previous years, additional tables supporting each indicator are placed in an appendix. New this year are a variety of features to improve access to each part of the volume.

Indicator Selection. The indicators portrayed here are selective. No more than 60 indicators are presented in each year's report. By contrast, the Center's major annual compendium, *The Digest of Education Statistics*, includes nearly 400 statistical tables, plus figures and appendices in its 1991 edition. The indicators represent a consensus of professional judgment on the most significant national measures of the condition and progress of education at this time, but tempered, necessarily, by the availability of current and valid information. They reflect a basic core that can be repeated with updated information every year, supplemented by a more limited set of indicators based on infrequent or one-time studies.

This year new indicators include:

- Enrollment below modal grade for language minority students (*Indicator 4*);
- International comparisons of mathematics and science performance (*Indicators 16* and *17*);
- International comparisons of educational attainment (*Indicators 21* and *23*);
- Course-taking in academic, vocational, and personal use education among high school graduates (*Indicator 25*);
- Programs and services offered by schools (*Indicator 40*);
- Crime in the schools (*Indicator 43*);
- Federal support for education (*Indicator 47*); and
- International comparisons of *public* expenditures for education (*Indicator 49*) extended to higher education.

Interest in Education Indicators. The concept of education indicators has gained the attention of the U.S. Congress, national organizations, states, and localities. To assist the Center in conceptualizing and developing a set of education indicators useful to policymakers and researchers, the Congress mandated that NCES convene a special study panel of experts to "make recommendations concerning the determination of education indicators for study and report" (Public Law 100–297). The report of this panel, titled *Education Counts: An Indicator System to Monitor the Nation's Educational Health*, was submitted to Congress in September 1991.

The report recommended that NCES abandon the simple organizing device that has been common in educational indicator reporting, that of grouping data into categories of inputs, processes, and outputs. Instead, as a framework for reporting, the panel selected six enduring issue areas: learner outcomes, quality of education institutions, readiness for school, societal support for learning, education and economic productivity, and equity. The panel also broke with the tradition of choosing indicators parsimoniously. Instead, the report describes an information system that leaves few corners of the learning enterprise unexamined. The cornerstone of the reporting system would be periodic reports in each of the issue areas.

Responding to these recommendations while serving the needs of policymakers presents NCES with several challenges—imposing sensible limits on the volume of indicator information, strengthening analytic and interpretive capacity, and distinguishing between data suitable for indicator reporting and data that are valid for statistical research and monitoring. We hope that in the future *The Condition of Education*, which addresses a unique need for a broad overview of the educational enterprise, will be just one component of a larger reporting system on the state of education in our nation.

In developing indicators, the Center has participated in a widening national discussion about the types of measures that are useful in monitoring the progress of education. The adoption of a set of National Education Goals by the President and the nation's governors was accompanied by a commitment to annual reporting on progress toward the goals. The National Education Goals Panel in September 1991 published its first report with selected indicators and recommendations for other appropriate measures by which the nation can monitor the goals. A number of local education agencies and states are monitoring their own reform agendas through education indicators. Also, at the national level, the Council of Chief State School Officers seeks to have consistent reporting by the states on a number of indicators that it has identified.

Data sources. The indicators presented in this report have been developed using data from studies carried out by NCES as well as from surveys conducted elsewhere, both within and outside the federal government. Although indicators may be simple statistics, more often they are analyses— examining relationships; showing changes over time; comparing or contrasting subpopulations, regions, or states; or studying characteristics of students from different backgrounds. Data used for these indicators are the most valid and representative education statistics available in the United States today for the subjects and issues with which they deal.

The utility of *The Condition of Education* should continue to increase as more diverse, high quality data become available, especially as new time series can be constructed. Elementary and secondary education data will be enhanced by revisions in the basic data collected about public schools in the Common Core of Data and about private schools from the Private School Survey. The Schools and Staffing Survey (SASS) and the National Educational Longitudinal Study of 1988 both contribute substantially to elementary and secondary education indicators.

The Integrated Postsecondary Education Data System includes information from accredited 2- and 4-year colleges and universities as well as nonaccredited institutions whether they are public or private, 4-year, 2-year, or less-than-2-year. Information from this broader group of institutions provides a much clearer picture of what is happening in the full scope of postsecondary education. Other studies being conducted by the Center will be the basis for new indicators on postsecondary education issues: the Beginning Postsecondary Student study, and the fourth followup of the High School and Beyond 1980 Sophomore Cohort.

I hope you find the material helpful and invite you to send us comments on how to make future editions even more useful.

Emerson J. Elliott
Acting Commissioner of
Education Statistics

This report was prepared in the Indicators and Reports Branch of the Data Development Division, under the general direction of Nabeel Alsalam. Overall direction was provided by Jeanne E. Griffith, Associate Commissioner for Data Development.

Many individuals contributed to the preparation of this report. In the past, *The Condition of Education* has relied almost entirely on previously published statistics. In this volume, the majority of indicators are based on original analyses of the source data, a feature which has immensely improved the timeliness and relevance of the published indicators. This would not have been possible without the significant contributions of Yupin Bae and James J. Corina of Pinkerton Computer Consultants, Inc., and for which we are especially grateful. They created new time series files with the Current Population Surveys of the last 24 years, enabling the presentation of important separate information on whites, blacks, and Hispanics and other time series. In addition, Yupin Bae edited all the graphics in the report and prepared them for color printing. Bruce Daniel and Beth Schlaline both of Pinkerton Computer Consultants, Inc. processed data from the School Crime Supplement of the National Crime Survey and the Schools and Staffing Survey, respectively.

From NCES, Edith K. McArthur developed *Indicator 4* and James Houser developed *Indicator 25*. Thomas D. Snyder was especially helpful in providing data and helpful comments for many indicators. Celeste A. Loar formatted all supplemental tables and readied them for publication. Charlene Hoffman provided technical and editorial assistance for *Indicator 47* and William J. Hussar provided data for *Indicator 48*.

From outside the Department of Education, Joel Sherman of Pelavin Associates provided assistance in estimating U.S. federal funds for education. Eldon Park of the Educational Testing Service provided GRE data. Norberto Bottani of the Organization for Economic Cooperation and Development (OECD) provided international data for *Indicators 21* and *23*.

Several persons were invited to review the plan for the 1992 edition of *The Condition of Education* and made valuable suggestions. They were: Jean McDonald of the National Governor's Association; Rolf Blank of the Council of Chief State School Officers; Larry Suter of the National Science Foundation; Audrey Pendleton of the Office of Policy and Planning, U.S. Department of Education; and Anthony Carnevale of the American Society for Training and Development.

This volume has been reviewed by many people, often within very tight time constraints and at the expense of their many other responsibilities. Their high professional standards, discerning eyes, and commitment to quality are crucial to the quality, utility, and relevance of the volume. Mary Frase and Jeanne Griffith critically reviewed the entire manuscript and made many important suggestions that improved the final result. OERI staff who reviewed portions of the manuscript were: Susan Ahmed, Sharon Bobbitt, Robert Burton, Michael Cohen, John Matthews, and Douglas Wright. Agency reviews were conducted by John Burkett of OERI; Alan Ginsburg of the Office Policy and Planning; Kathleen Johnson of the Office of Private Education; Nguyen Ngoc Bich of the Office of Bilingual Education and Minority Language Affairs; and Betsy Brand of the Office of Vocational and Adult Education.

Several individuals served as invited external peer reviewers of the draft manuscript and made valuable contributions. They were: Clifford Adelman, Office of Research, OERI; Glynn Ligon, Austin Independent School District; Paul Siegel, Education Analysis Staff, Bureau of Census; Ray Valdivieso, Academy for Educational Development, Inc.; William Velez, Department of Sociology, University of Wisconsin, Milwaukee; and Linda Winfield, Center for the Effective Education of the Disadvantaged, Johns Hopkins University.

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> "Why do we seek to know the condition of education? In the answer to this question will be found the reasons for the elaborate statistical record which forms a feature of all official school reports. We take an account of education so that we may know whether it is sufficient in amount and good in quality."
>
> Henry Barnard
> First Commissioner of Education

Introduction

During the 1980s, the country became increasingly aware of the range of critical issues facing education. These issues were nationwide in scope, and included inequality of opportunity for a good education for all segments of the population, general low academic performance, drug use and violence in the schools, unacceptably high dropout rates, high cost of a college education, and slowing productivity growth of workers. These concerns continue to have serious implications, not only for schools and colleges, but for the future of individual citizens, U.S. economic competitiveness, and ultimately the structure and cohesiveness of American society and culture.

The Condition of Education provides a means to report where progress is being made and where it is not, to draw attention to emerging issues, and to inform the ongoing policy debate.

The Structure of the Condition of Education

A quick tour of the volume may help the reader make the best use of it. The core of the volume consists of 60 indicators. Each indicator is presented on two pages. However, included in the back of the volume are supplemental tables providing additional details, and sometimes an explanatory note on a technical or data-related issue.

The 60 indicators are organized into 6 sections. The 6 sections are: 1) Access, Participation, and Progress; 2) Achievement, Attainment, and Curriculum; 3) Economic and Other Outcomes of Education; 4) Size, Growth, and Output of Educational Institutions; 5) Climate, Classrooms, and Diversity in Educational Institutions; and 6) Human and Financial Resources of Educational Institutions. Instead of separating elementary and secondary education from postsecondary education indicators, this edition integrates elementary, secondary, and postsecondary education into each of the six sections. One can find information on an issue either by using the table of contents which lists the 60 indicators or by using the index which references not only the indicators but also the supplemental tables. When an updated indicator is not available in this volume, the index references the indicator number and edition of the *Condition of Education* which last published the indicator.

Each of the 6 sections of indicators is introduced with a short essay which interprets and summarizes some of the results that are found in the indicators as they relate to an important issue. In addition, the results from throughout the volume as they relate to particular issues that cut across the sections of the report are pulled together below.

At the bottom of each of the two indicator pages is the source of the data for the indicator. A description of the sources is provided starting on page 375. Sometimes more knowledge about the type of survey used to calculate the indicator can give the reader insights into interpreting the indicator. Some of the terms used in this report may not be familiar to all readers. Thus, a glossary is provided starting on page 401.

An indicator is not the same as a statistic because it is carefully designed to allow comparison, either over time, across countries, between groups, between sectors of education, and so forth. For this reason, the same data may be used to construct several indicators. For example, *Indicator 8* uses data on enrollment in college to calculate the percentage of high school graduates enrolled in college. This percentage is the rate at which a specific population group participates in higher education. This indicator is informative about opportunities available or pursued, and it can be compared over time and between age groups. *Indicator 47* also uses data on enrollment to calculate the percentage of students who are of certain ages. This indicator is informative about the changing age composition of students, and it can be compared over time and between sectors of higher education.

In the remainder of the overview, we gather some of the disparate pieces of evidence on selected issues: math and science education with an emphasis on differences between males and females, the education of minority groups including blacks and Hispanics, and the education of women. References to indicators and tables are given in parentheses. The table references are to the supplemental tables starting on page 157. Occasionally, references to indicators in a previous edition of *The Condition of Education* are given and can be recognized by the year added to the reference.

Math and Science

The President and the governors set a goal that U.S. students be first in the world in math and science achievement by the year 2000. By both highlighting the importance of math and science and setting a high standard for U.S. students to achieve, the hope is to stimulate efforts of schools and teachers to improve math and science education and to encourage more students to study math and science and take pride in doing well. In particular, policymakers hope to increase participation in math and science among women, blacks, Hispanics, and students from low income families. To excel in math and science, possibly more than in other subjects, requires early interest, participation, and achievement, so the indicators range from math and science achievement of 9-year-olds to the fields of conferred doctor's degrees. The results outlined below highlight differences between males and females.

Achievement of girls compared to boys

The National Assessment of Educational Progress (NAEP) has been reporting the performance of students in reading, writing, science, mathematics, and other subjects for the past 20 years. At age 9, there was no difference between boys and girls in average math proficiency from 1973 to 1990. In science, the same general conclusion holds but is weaker. By age 17, girls seem to have fallen a little behind. In 1990, the average mathematics proficiency of 17-year-old men and women were similar, but in earlier years 17-year-old men were a little more proficient than women (*Indicator 14*). However, among college-bound men and women who take the SAT women on average score 45 points lower on the math component (Table 18-9). In science, the differences were larger, but there is some evidence it has been shrinking (*Indicator 15*). In 1990, a greater percentage of eighth-grade girls than boys reported that they never used computers or wrote reports or projects in their math classes (*Indicator 42*).

International comparisons show that patterns of differences between boys and girls in math and science achievement are similar in the United States and other countries. In most of the countries participating in the 1991 International Assessment of Educational Progress (IAEP), 9-year-old boys and girls performed equally well on the mathematics assessment, but, in several countries, girls did slightly less well than boys at age 13 (*Indicator 16*). Korea was an exception: there, girls scores' were slightly lower than boys' at age 9 but appeared to catch up to them by age 13. In science, 9-year-old girls already were performing poorer than boys in most countries, except for the United States, and by age 13 were behind in even more countries, including the United States (*Indicator 17*). Taiwan was an exception: there, girls scored lower than boys at age 9 but scored equally well at age 13.

However, girls in the United States seem to fall behind their counterparts in other countries between the ages of 9 and 13. In math, at age 9, girls were already behind their counterparts in Korea, the former Soviet Union, and Taiwan; by age 13 they had also fallen behind their counterparts in Canada. In science, at age 9, girls scored comparably to their counterparts in Korea, Taiwan, and Canada and higher than their counterparts in the Soviet Union; by 13 they had fallen behind their counterparts in Korea, the Soviet Union, and Taiwan (*Indicator 17*).

Course-taking

In the high school class of 1987, women took slightly more of their credits in academic subjects than men, but slightly fewer credits in math (2.92 v. 3.03) and science (2.53 v. 2.66). Although women were more likely than men to take algebra I and algebra II and as likely to take geometry, they were less likely to take trigonometry, analysis, or calculus. Although women were more likely than men to take biology, they were less likely to take chemistry, and much less likely to take physics.[1]

The differences between men and women in math and science course-taking that have begun to appear in high school become larger in college. In addition, a background in math and science in high school can be important for studying other subjects in college, such as computer science and engineering. In 1990, women were less likely than white men to major in the natural sciences as undergraduates. Asian women were an exception—they were substantially *more* likely than white men to major in the natural sciences (*Indicator 26*). However, differences between men and women have been narrowing since the early 1970s. Women were much less likely than men to major in computer science or engineering as undergraduates. The situation has changed, however, because women in the 1980s were more likely to choose these fields than they had been in the 1970s (Table 2:10-2, 1991).

At the graduate level, men still are even more likely than women to major in the natural sciences than at the undergraduate level. In 1990, at the master's degree level men were 75 percent more likely than women and at the doctorate level were 53 percent more likely than women to major in the natural sciences. Men were five times more likely than women to major in computer science and engineering at the graduate level, about the same as they were at the bachelor's level (*Indicator 27*).

Postsecondary degrees

Change in the number of higher education degrees conferred in math, science, and engineering fields is an indication of the supply of new talent. However, the growth or decline in the number of degrees conferred may not be indicative of an oversupply or shortage of scientists and engineers. A shortage would be indicated if graduates in these fields were finding an increasing number of job offers and if the salaries being offered were rising.

The number of bachelor's degrees conferred in the natural sciences has fallen since 1975. While the number of bachelor's degrees in all fields increased between 1975 and 1990, the number in the natural sciences fell. Fewer college graduates are choosing to study physical and life sciences (Table 28-1). The number of degrees conferred in engineering rose then fell during this period—from 46,900 in 1975, to 96,100 in 1985, and down to 82,100 in 1990. On the other hand, the number of college students earning bachelor's degrees in computer and information sciences increased from 5,000 bachelor's degrees in 1975 to 27,400 in 1990 (Table 28-3). Although there have been shifts in the number of degrees in specific science and engineering fields, the total number of bachelor's degrees in these fields fell significantly between 1986 and 1990—from 214,400 to 177,400 degrees.

At the graduate level, the patterns were generally of stable or falling numbers during the last half of the 1970s and of stable or rising numbers during the 1980s. The total number of science and engineering master's degrees was stable during the last half of the 1970s and grew during the 1980s. The growth was almost entirely in computer science and engineering fields. At the doctorate level the pattern was similar for the total number of science and engineering, but the number of natural science degrees grew 17 percent in the 1980s. It should be noted that a substantial number of graduate level degrees in science and engineering fields are awarded to non-U.S. citizens most of whom do not have definite postgraduate plans in the United States (*Indicator 2:21 and Table 2:21-5, 1991*).

Minorities

Getting a high quality education is one of the means available to blacks and Hispanics to fight their economic disadvantages. Black and Hispanic children are much more likely to live below the poverty line. In 1990, 44 percent of black children and 38 percent of Hispanic children compared to 15 percent of white children lived in families with income below the poverty line (*Indicator 39*). The size of the differences and the change over time in differences in educational achievement between blacks and Hispanics on the one hand and whites on the other are outlined below.

Blacks

Starting disadvantaged children in education early is the philosophy behind Head Start, a popular program for disadvantaged preschool children. However, differences in access to education between black and white children start before kindergarten. In 1989, 30 percent of black 3- and 4-year-olds were in a nursery school program compared to 40 percent of whites. While there has been an increase in the proportion of both white and black 3- and 4-year-olds attending nursery school, the proportion for whites has increased at a faster rate. On the other hand, in 1989, 78 percent of black 5-year-olds were in kindergarten, similar to the rate (81 percent) for whites (*Indicator 2*).

Elementary school. Since the mid-1970s the percentage of 8- and 13-year-old children who were "behind", that is, one or more years below the modal (most common) grade for their age, has risen for all children (*Indicator 3*).[2] However, more black than white children fall behind between ages 8 and 13.[3] In 1989, 27 percent of black 8-year-old boys were in 2nd grade or below, about the same as their white counterparts. However, 49 percent of black 13-year-olds were in 7th grade or below, compared to 32 percent of their white counterparts. Though girls in general are less likely than boys to be below the modal grade for their age, 8-year-old black girls were already behind their white counterparts.

As early as age 9, academic proficiency in reading, math, and science as measured by the National Assessment of Educational Progress (NAEP) is lower for black children than for their white counterparts. However, in recent years the gap was narrower than it was two decades ago. In 1990, black 9-year-olds were 35 scale points behind whites in reading, compared to 44 scale points behind in 1970 (*Indicator 12*); 27 points behind whites in math, compared to 35 points behind in 1973 (*Indicator 14*); and 42 points behind in science, compared to 57 points behind in 1970 (*Indicator 15*). The patterns for 13-year-olds were similar. As a basis for comparison, consider that, in 1990, the increase per year of age in average proficiency between age 9 and 13 in reading, math, and science was 10, 12, and 7 scale points, respectively.

Secondary school. Black teenagers have substantially increased their efforts in high school. Despite more black 13-year-olds being one or more years below modal grade, fewer black teenagers are dropping out of high school before graduating. Between 1989 and 1990, 5 percent of black high school students 15 or older in grades 10–12 dropped out of school compared to 3.3 percent of whites. Although still considered too high by many educators, the rate among blacks (5 percent) was substantially lower than it was 2 decades earlier (9.9 percent, *Indicator 5*). In 1990, 78 percent of black 19- to 20-year-olds had graduated from high school compared to 68 percent in 1973 (*Indicator 20*). The completion rate for whites was higher (87 percent) but largely unchanged over the same period, so the black-white differential narrowed considerably.

Near the end of high school, NAEP again gives evidence that there is a large but narrowing gap in achievement between blacks and whites. Blacks have improved relative to whites in reading, mathematics, and science. For example, in 1971 average reading proficiency among 17-year-old blacks was well below (52 scale points) 17-year-old whites and also below (22 points) 13-year-old whites; in 1990, the proficiency of 17-year-old blacks was closer (22 points) to that of 17-year-old whites, and slightly higher than 13-year-old whites. In 1970, average mathematics proficiency among 17-year-old blacks was 40 scale points behind their white counterparts and about the same as 13-year-old whites; in 1990, it was 21 points behind 17-year-old whites, and 13 points above 13-year-old whites.

The Scholastic Aptitude Test (SAT) provides corroborating evidence of the gains made by blacks. In 1991, average black scores were 90 points lower than whites' on the verbal component of the SAT and 104 points lower on the math component; in 1976 they had been 119 and 139 points lower, respectively (Tables 18-8 and 18-9). The conclusion is the same—blacks are behind their white counterparts but catching up.

Higher education. Gains made by blacks in higher education are not as dramatic as those in elementary and secondary education. The percentage of blacks enrolling in college in the fall following high school graduation was near 50 percent in the late 1980s, about the same as it was in 1978 (an earlier high point for this indicator). The percentage of blacks going immediately on to college has increased since 1983, as has the rate for whites, so the gap remains at about 14 percentage points (*Indicator 7*). Some of the difference may be made up by delayed entry, as blacks are more likely than whites to enroll in college after a delay (*Indicator 2:2, 1991*). Overall, about 30 percent of black high school graduates 16–24 years old were enrolled in college as undergraduates during the late 1980s, about the same as were during the last half of the 1970s. In contrast, in 1990, about 38 percent of their white counterparts were enrolled in college, up from 30 percent a decade earlier (*Indicator 9*).

College attainment among blacks is far lower than it is for whites. In 1991, 41 percent of black high school graduates 25 to 29 years old had completed 1 or more years of college, compared to 55 percent of their white counterparts. In addition, only 14 percent of black high school graduates old had completed 4 or more years of college compared to 30 percent of their white counterparts. During the 1970s, the percentage of both white and black high school graduates completing 1 or more or 4 or more years of college grew; during the 1980s, however, there was little change in these college attainment rates (*Indicator 22*).

Using information on the number of bachelor's degrees awarded, the pattern of change in degrees earned between 1977 and 1990 was different for black men and women. The number earned by men declined each year except for the most recent one, whereas the number earned by women fluctuated up and down. In contrast, the number of bachelor's degrees earned by white women increased each year and, after 1979, the number earned by white men remained stable despite a decline in the number of whites graduating from high school early in the decade (*Indicator 24*).

The fields of study of black degree recipients often differ from those of whites at both the undergraduate and graduate levels, but these differences have narrowed over time. In 1990, at the bachelor's degree level, black men were less likely than white men to major in the natural sciences but more likely to major in technical/professional fields (other than education and business). At the doctorate level, black men were much less likely than white men to major in the natural sciences or in the computer sciences and engineering, but much more likely to major in education. Among women, blacks were less likely than whites to major in education at the bachelor's level, but more likely to do so at the doctor's level (*Indicator 26*).

Although blacks generally earn less than whites, among both blacks and whites those with more education have better employment and earnings outcomes. In 1990, only 31 percent of blacks who dropped out of high school between 1989 and 1990 were employed. Among blacks who completed high school but did not enroll in college, 45 percent were employed—higher but still very low (*Indicator 29*). Earnings among 25- to 34-year-old blacks, particularly black women, show that the incentive to pursue additional education is sizeable. In 1990, black males with 9–11 years of schooling earned 28 percent less than those with 12 years of schooling; those with 4 or more years of college earned 66 percent more. Black females with 9–11 years of schooling earned 56 percent less than those with 12 years of schooling; those with 4 or more years of college earned 109 percent more. Between 1974 and 1990, for blacks the earnings advantage of completing college increased (*Indicator 31*).

Hispanics

Hispanics, as a minority group in the United States, have had a very different history than blacks. There is a great deal of diversity among Hispanics. The three largest Hispanic subgroups are Mexican-Americans, Puerto Ricans, and Cubans. Recent immigrants from Central and

South America are a fourth group. They live in different parts of the United States, their economic circumstances vary, and their periods of immigraton are different. Still, all share the Spanish language in their cultural heritage. Of course, a much higher proportion of Hispanics than non-Hispanics are foreign born. As a result, Hispanic children are more likely not to hear or speak English at home and are more likely to have limited English proficiency.[4] As mentioned earlier, in 1990, 38 percent of Hispanic children lived in families with income below the poverty line, compared to 15 percent of white children (*Indicator 39*). Although the source of their disadvantages are different, the effects on their performance in the education system are not unlike blacks. Highlighted below are noteworthy differences in the education of Hispanics on the one hand, from blacks and whites on the other.

Hispanics, like Asians, are a growing minority group in the United States; the percentage of students who are Hispanic has increased substantially. In 1989, 20 percent of students in public schools in the central cities of metropolitan areas were Hispanic, up from 11 percent in 1972. In public schools in other parts of metropolitan areas 10 percent of the student body were Hispanic; in private schools, 7 percent were Hispanic (*Indicator 37*).

Most racial/ethnic groups reported a similar percentage of occurrence of *most* types of criminal activity in their school in 1989. One exception was that Hispanics were much more likely to report the presence of street gangs in their schools—32 percent, compared to 12 percent of whites and 20 percent of blacks (*Indicator 43*).

Preprimary. Hispanic 3- and 4-year-olds were less likely than both black and white children to attend nursery school—in 1989, that rate was 20 percent compared to 30 percent of black children and 40 percent of white children. The gap between Hispanics and whites has grown over time—the proportion of white children attending nursery school increased from 22 percent in 1974 to 40 percent in 1990, while for Hispanics it increased from 16 percent in 1974 to only 20 percent in 1990. On the other hand, in 1990, 78 percent of Hispanic 5-year-olds attended kindergarten, comparable to the rate (81 percent) for white 5-year-olds (*Indicator 2*).

Elementary school. Like black children, Hispanic 13-year-old students generally were more likely to be below the modal grade for their age than their white counterparts. Also, the gap between Hispanics and whites in the proportion of 13-year-old boys below grade level was greater in recent years than it had been in the mid-1970s. The disparity between Hispanic and white 13-year-old girls is large but has not increased over the 1974–1989 period (*Indicator 3*).

Secondary school. The gains blacks have made in their high school education have not been shared by Hispanics. The number of credits in academic subjects has increased for Hispanics. Hispanics in the high school class of 1987 took 15 credits in academic subjects, up from 13 in 1969 (Table 25-1). On the other hand, improvements in average proficiency in reading, math, and science were not as prevalent among Hispanics as they were among blacks (*Indicators 12, 14, and 15*). The school persistence rate for Hispanics has been near 90 percent for most of the past two decades, whereas for blacks it has gradually increased (*Indicator 5*). Fewer Hispanics have completed high school. In 1991, 56 percent of Hispanics 25- to 29-years-old had completed high school, compared to 81 percent of blacks and 90 percent of whites. The high school completion rate of Hispanics has remained fairly stable (fluctuating between 55 and 63 percent) since the mid-1970s while the rate for blacks has increased (from 69 percent in 1975 to 81 percent in 1991, *Indicator 22*).

Higher education. Hispanics who go on to college are more likely to enroll in a 2-year college than blacks. In the fall of 1990, 55 percent of Hispanic college students were enrolled in 2-year colleges compared to 37 percent of white students and 42 percent of black students. (supplemental table 38-1).

While the percentage of Hispanic high school graduates 25 to 29 years old who have completed 4 or more years of college has not increased over the past 2 decades, the percentage with some college has increased, from 25 percent in 1971 to 43 percent in 1978; since then, it's been fairly stable (*Indicator 22*).

Data of another type are more encouraging. The number of bachelor's degrees conferred to Hispanics increased substantially during the 1980s, particularly for women. In 1990, 62 percent more bachelor's degrees were awarded to Hispanic women than in 1981; 38 percent more were awarded to Hispanic men. These increases appear to be larger than the increase in the number of Hispanics graduating from high school. The number of advanced degrees awarded to Hispanics has also increased, but not as much. In 1990, 21 and 43 percent more advanced degrees were awarded to Hispanic men and women, respectively, than in 1981 (*Indicator 24*).

Fields of study. The fields Hispanics chose to study for their bachelor's degrees are largely similar to those whites selected. Hispanics are somewhat more likely than whites to major in the humanities and social/behavioral sciences and somewhat less likely to major in education (*Indicator 26*).

Labor market outcomes. While the employment rate is low both for Hispanics who have graduated from high school but not enrolled in college and for Hispanics who have left high school without graduating (dropouts), there is some evidence that Hispanic dropouts find it somewhat easier than black dropouts to get work (*Indicator 29*).

Females

Over the last two decades women have made important advances in their education that puts them on a par with men in many areas. Below are summarized some of the differences between boys and girls, as well as men and women on education indicators and where there has been change over time.

Generally girls start school ahead of boys and are less likely to be behind. For example, 22 percent of 8-year-old girls versus 28 percent of boys were in grade 2 or below in October 1989. By age 13 the disparity was larger—26 percent of girls versus 36 percent of boys were in grade 7 or below (*Indicator 3*). In the high school class of 1987, girls took more credits in academic subjects than boys (16.0 v. 15.3), whereas in the class of 1969 boys and girls took about the same number (14.9, *Indicator 25*). Girls exhibit higher average proficiency in reading and writing than boys at ages 9, 13, and 17 (*Indicators 12 and 13*). However, among college-bound men and women who take the SAT exam, women have scores about 10 points lower than men on the verbal component (Table 18-8). Girls were more likely than boys to finish high school on time, and among dropouts, girls were as likely as boys to return and finish later (*Indicator 6*).

From 1976 to 1987, women and men were equally likely to enroll in college in October following graduation, but in the late 1980s women were slightly *more* likely than men to do so (*Indicator 7*). Women under the age of 25 who have completed high school are somewhat less likely than men to be enrolled in a 4-year college (*Indicator 8*). However, the number of bachelor's degrees conferred on women has increased more rapidly than it has for men (*Indicator 24*).

The college attainment of women has caught up to that of men. In the early 1970s, among high school graduates, about 40 percent of women compared to 50 percent of men 25 to 29 years old had completed 1 or more years of college; in the late 1980s, about 52 percent of both women and men had done so (Table 22-2). In the early 1970s, among high school graduates about 20 percent of women compared to 27 percent of men 25 to 29 years old had completed 4 or more years of college; in the late 1980s, about 27 percent of both women and men had done so (Table 22-3).

Data on the number of degrees conferred demonstrate more clearly the educational progress of women. In 1990, more associate's, bachelor's, and master's degrees were awarded to white women than to their male counterparts, whereas in 1977 the reverse was true. Though fewer doctor's degrees were awarded to white women than to white men, the gap has closed considerably. In 1977, almost 3 times as many doctorate degrees were awarded to white men as to white women; in 1990 men were awarded only 41 percent more. Among Hispanics the patterns were similar. Among blacks, women were awarded more of each degree than men in both 1977 and 1990 with the exception of doctor's degrees in 1977. Among Asians the pattern is reversed—women earned fewer of each degree than men in both 1977 and 1990 with the exception of associate's degrees (Tale 24-1).

The fields that women and men study in college remain very different despite narrowing of differences at the undergraduate level and in some fields at the graduate level. At the bachelor's level, women were more than 3 times as likely as men to major in education in 1989, but that was down from what it had been in 1971 (*Indicator 2:10*, 1991). A notable exception is Asian women who were *less* likely than white men but more likely than Asian men to major in education (*Indicator 26*). At the master's degree level, however, women were 2.8 times as likely as men to major in education, which was up substantially from 1971 (*Indicator 27*). On the other hand, women are increasingly likely to major in business at the master's level—whereas, women were less than one-tenth as likely as men to major in business in 1971, they were half as likely by 1990.

Despite the lagging achievement of girls in the United States in math and science compared to their counterparts in other countries cited above, women in the United States generally have higher educational attainment than their counterparts in other countries. For example, in 1987 among U.S. women 25–64 years old, 82 percent had completed high school—far more than their counterparts in countries such as Japan, West Germany, the United Kingdom, France, and Canada. Also, 21 percent had completed 4 or more years of college, again far more than their counterparts in other countries (Table 23-1).

In a few countries the educational attainment of younger generations of women has improved rapidly. This is evident in the fact that the attainment of women 25–34 years old was substantially higher than for all women. The result is that the gap is closing between the educational attainment of women in these countries and in the United States. For example, in Japan 92 percent of women 25–34 years old had finished *secondary* education, and in West Germany 88 percent had done so, compared to 87 percent in the United States. Nevertheless, women 25–34 years old in the United States were still much more likely to complete *higher* education than their counterparts in Japan and West Germany (*Indicator 23*). In addition, the percentage of women graduating in the science fields (including health sciences) was much higher in the U.S. than in Japan or West Germany (*Indicator 2:8*, 1991).

The labor force participation rates of women rose steadily throughout the 1970s and 1980s for those with a high school education or better. By 1991, for women 25–34 years old who had completed college, the percentage employed was about 9 percentage points lower than for men—83 versus 92 percent, in contrast to a 36 point gap in 1971 (*Indicator 30*). Women college graduates shared in the growth in earnings for all college graduates in the 1980s. Although women college graduates earn less on average then men college graduates, the earnings advantage women who are college graduates enjoy over their counterparts with only a high school education is greater than that enjoyed by men (*Indicator 31*).

Conclusion

The preceding discussion has highlighted only a few of the issues treated by the 60 indicators in this volume. *The Condition of Education* presents data and analyses on a wide variety of issues in education. The reader is encouraged to read the overviews to each section for discussion of other issues, to peruse the indicators of interest, and to use the tables for additional details. Finally, included in the back of the volume is a user comment form. Your comments will help make future editions of *The Condition* more useful.

NOTES:

1. Kolstad, Andrew and Judy Thorpe, "Changes in High School Course Work from 1982 to 1987: Evidence from Two National Surveys," paper presented to the annual meetings of the American Educational Research Association, March 1989.

2. This trend may be due to a variety of factors including 1) parents being increasingly willing to have their children repeat kindergarten or start 1st grade late, 2) schools being increasingly less willing to let parents start their children in school early, and 3) a decline in the practice of "social

promotion" or promoting children to the next grade for social reason who are academically unprepared.

3. Most 8-year-olds are in 3rd grade and most 13-year-olds are in the 8th grade. Many 8-year-olds who are in 1st or 2nd grades did not start school until they were 7. This is particularly true for boys who are often less mature than girls at ages 5 and 6. However, the percentage of students below the modal (most common) grade for their age generally increases with age. The increase is an indication of the practice of parents and teachers deciding to hold a student in a grade who they believe is not ready for the next grade. The increase, which was larger for black than for white boys, is an indication that parents and teachers were more frequently holding black boys back compared to white boys. This difference, in turn, is an indication that black boys were falling behind white boys academically.

4. U.S. Department of Commerce, Bureau of the Census, November Current Population Survey, 1979 and 1989, unpublished tabulations.

Participation

Enrollment rates among children 6 to 15 years old are essentially 100 percent, while enrollment among children 3, 4, and 5 years old has increased substantially over the past two decades. In 1990, 1 out of every 3 children 3 years old was enrolled in school, double the proportion in 1972; 56 percent of 4-year-olds were enrolled in school, up from 34 percent in 1972. In 1990, 93 percent of 5-year-olds were enrolled, up from 86 percent in 1972 (*Indicator 1*). Virtually all children have attended kindergarten before starting 1st grade.[1]

Enrollment rates among 16- to 23-year-olds have also increased over the past two decades. For example, the enrollment rate of 22-year-olds was 28 percent in 1990, up from 21 percent in 1972 (*Indicator 1*). Undergraduate enrollment rates for 16- to 24-year-old high school graduates increased from 30 percent in 1980 to 37 percent in 1990 (Table 8-1). These increases in large part account for the fact that enrollment in colleges has not declined despite smaller high school graduating classes. Surprisingly, enrollment *rates* have not increased among 24- to 34-year-olds. The increase in the *number* of older students in colleges and universities is due to an increasing number of people of older ages in the population (the aging of those born during the post World War II baby boom), not to an increasing *percentage* of the older population enrolling in college.

The trends outlined above were not the same in all population groups. The increase in enrollment rates among 3- and 4-year-olds in nursery schools was larger for whites than for blacks and Hispanics. During the 1980s, among 3- and 4-year-olds, the percentage of whites enrolled in nursery school increased while for blacks and Hispanics this rate was generally stable. On the other hand, among 5-year-olds, the difference in the percentage of whites and blacks enrolled in kindergarten fell between 1974 and 1990 (*Indicator 2*). At the college level, among high school graduates 16 to 24 years old, the percentage of white males, white females, and black males enrolled in college as undergraduates increased 8 percentage points during the 1980s (for black males the increase was largely confined to the last three years); for black females, Hispanic males, and Hispanic females there was no change in this college attendance rate (*Indicator 9*).

Access

Access to preschool may be affected by income disparities. On average, black and Hispanic families have less income than white families—44 percent of black children and 38 percent of Hispanic children live in families with income below the poverty line compared to 15 percent of white children (*Indicator 46*). Nursery schools are primarily private (66 percent of enrollment in 1990) where the percentage of minority children has remained stable since 1973. On the other hand, kindergartens are primarily public (84 percent of enrollment in 1990) where the percentage of minority children has risen (*Indicator 33*). Thus, the slower rise of enrollment rates in nursery schools among black and Hispanic 3- and 4-year-olds compared to whites, may partially be due to economic considerations (*Indicator 2*).

In higher education, access to a public college or university is widely available—they enrolled 78 percent of college students in 1990. Nevertheless, attending a public college or university is not without cost—in 1990, tuition, room, and board averaged $4,976, and tuition alone averaged $1,367 at public institutions (*Digest of Education Statistics, 1991*, Table 291). During the 1980s, the cost of attending college relative to family income increased for all families, but it increased more for low income families. At public institutions, tuition, room, and board increased from 10 percent of median family income to 13 percent in 1990. For those at the 25th percentile of family income, public college costs increased from 17 percent of their income in 1980 to 23 percent in 1990; and at the 75th percentile, the figures were 7 and 8 percent in 1980 and 1990, respectively (Table 11-1). However, despite the increasing cost of college throughout the 1980s, the percentage of high school graduates enrolling in college in the October following graduation has, for whites, increased throughout the 1980s, for blacks has increased since 1983, and for Hispanics has increased since 1986 (*Indicator 7*).

Persistence

The persistence rate is a measure of continued school enrollment from one year to the next, an important factor for eventual completion (*Indicator 5*). Research evidence indicates that high school students who are old for their grade are at greater risk of dropping out.[2] However, persistence rates in high school (and college) have shown evidence of increasing despite increasing percentages of students who are one or more years behind the typical grade for their age.

Overall, the persistence rate in high school was 96 percent in 1990; that is, 96 percent of students in grades 10 to 12 in the fall of 1989 either were enrolled again in the fall of 1990 or had graduated during the year. The other 4 percent dropped out of school during the year or failed to return in the fall. For blacks the persistence rate was 95 percent and for Hispanics it was 92 percent, compared to 97 percent for whites. For blacks the rate has gradually improved over the past 2 decades; for Hispanics there is no clear evidence of improvement.

In earlier grades, blacks are more likely than whites to be below the modal grade for their age. In October 1989, almost half of black 13-year-old boys were in grade 7 or below, compared to 32 percent of white 13-year-old boys (*Indicator 3*). The improvement in high school persistence rates among black high school students suggests that perhaps as students who are old for their grade becomes more common, that factor may become less of a predictor of dropping out.

Between 1974 and 1989, the percentage of children who were one or more years below the modal (most common) grade for their age increased for most race/ethnic/sex groups. Some of these trends may be due to parents' deciding to delay having their children start first grade—the percentage of first-grade children who were 7 years old or over in October increased from 13 percent in 1973 to 23 percent in 1990.[3] Generally, a larger percentage of boys than girls are 1 or more years below the modal grade level for their age; also, a larger percentage of 13-year-olds than 8-year-olds are below the modal grade for their age; and among 13-year-olds, a larger percentage of black and Hispanic boys and girls are behind the modal grade for their age (*Indicator 3*) than their white counterparts. In 1979, children who spoke a language other than English at home or had limited proficiency in English were more likely than all children as a group to be behind the modal grade for their age, but this was not the case in 1989 (*Indicator 4*).

In higher education, persistence—that is, continued attendance from one year to the next—and full-time attendance are associated with higher rates of degree attainment. Persistence rates among college students at each level increased through the 1970s and 1980s (Table 5-2). Between October 1989 and October 1990, 82 percent of college students enrolled in their first, second, and third year of college stayed in college. (Contrast this persistence rate to the 96 percent rate in high school.)

Efforts to increase access of minorities to higher education may be undermined by lower persistence among minorities. The persistence rates among black and Hispanic college students generally are somewhat lower than among whites, and there is no evidence that the rate of persistence among either blacks or Hispanics has been increasing.

NOTES:

1. U.S. Department of Education, National Center for Education Statistics, National Household Education Survey, spring 1991 (reported in Statistics in Brief, "Experiences in Child Care and Early Childhood Programs of First and Second Graders," January 1992.)

2. *Turning Points: Preparing American Youth for the 21st Century*, Carnegie Council on Adolescent Development, Carnegie Corporation of New York, 1989.

3. U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys, unpublished tabulation.

School enrollment rates by age

- **During the 1970s and 1980s, practically all children between the ages of 6 and 15 were enrolled in school.**
- **Enrollment rates for 3-, 4-, and 5-year-olds were substantially higher in 1990 than in 1972. Especially for 3-year-olds, the increase was greater in the 1970s than in the 1980s.**

> ***Learning occurs throughout a person's life. Participation in formal education traditionally has occured during a person's youth. Changes over time in the enrollment rate of a particular age cohort are an indication of the changing role of formal education institutions in U.S. society.***

- **Enrollment rates among 17- to 23-year-olds were higher in 1990 than in 1972; enrollment rates among older age groups did not increase over the period.**

Percentage of population enrolled in school, by age: October 1972, 1981, and 1990

	Age															
October	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1972	15.8	34.0	85.7	98.5	99.6	99.9	99.8	100.0	99.8	99.9	99.8	98.6	97.7	93.8	85.6	57.5
1981	27.6	45.4	90.2	98.9	99.6	99.7	99.7	99.9	99.7	99.6	99.9	99.0	97.7	94.6	87.3	57.9
1990	32.6	56.1	93.2	99.8	99.5	99.9	99.6	99.6	99.6	99.7	99.6	99.6	98.4	95.6	89.5	64.4

	Age															
October	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1972	42.7	37.8	31.2	20.5	16.9	15.2	13.8	11.9	9.9	8.4	9.1	7.1	6.8	6.7	5.9	5.6
1981	43.4	36.5	29.7	21.9	16.4	14.2	11.6	10.7	9.2	9.3	8.1	8.7	8.3	8.0	6.7	6.2
1990	50.6	42.9	36.4	28.1	19.2	16.2	11.8	11.7	9.7	8.7	6.9	6.5	7.6	5.5	4.2	5.4

Percentage of population enrolled in school for selected ages: October 1972–1990

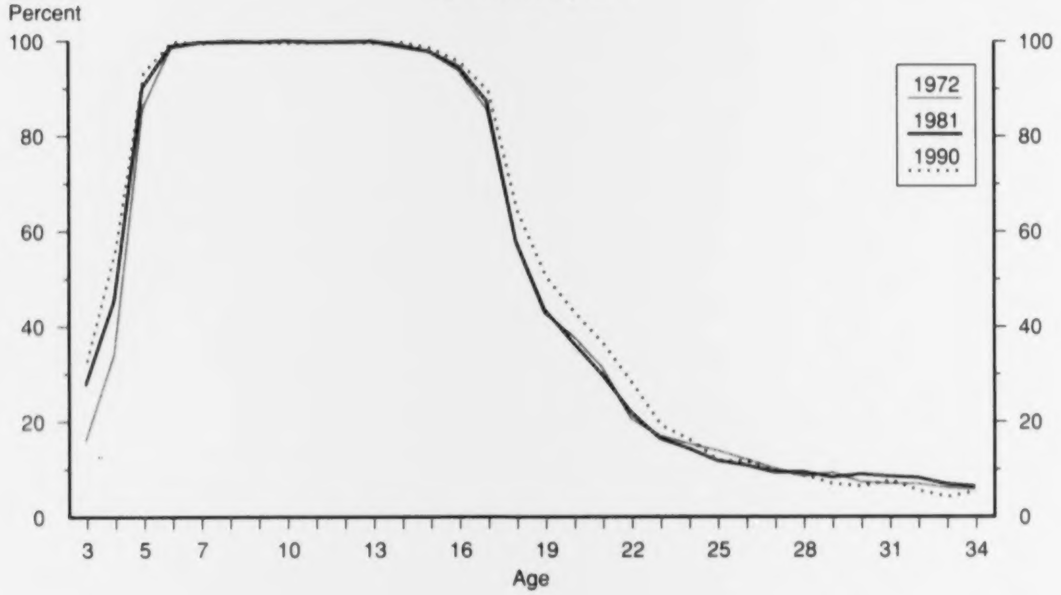
	Age										
October	3	4	5	16	17	18	19	20	21	22	23
1972	15.8	34.0	85.7	93.8	85.6	57.5	42.7	37.8	31.2	20.5	16.9
1973	14.8	35.1	86.8	93.2	84.5	52.2	40.2	33.4	30.2	19.0	14.4
1974	20.0	38.3	89.9	93.7	82.9	53.2	39.4	33.4	31.6	20.1	15.9
1975	22.1	41.5	90.9	94.3	84.3	56.2	42.9	36.5	31.6	21.9	17.8
1976	20.8	42.7	92.3	93.3	86.2	53.0	44.8	37.1	30.9	22.3	16.7
1977	22.0	43.2	92.4	93.9	84.9	56.9	41.8	37.1	32.9	21.8	17.6
1978	25.7	44.7	92.1	94.7	85.0	52.4	42.7	33.7	28.6	21.9	16.2
1979	25.4	46.1	93.0	94.4	85.3	55.9	41.3	35.1	30.0	21.1	17.3
1980	27.6	47.2	93.2	93.9	85.2	54.6	43.0	33.9	30.6	22.3	16.7
1981	27.6	45.4	90.2	94.6	87.3	57.9	43.4	36.5	29.7	21.9	16.4
1982	27.6	46.1	91.5	94.6	88.1	57.1	43.4	38.9	32.7	22.2	17.2
1983	28.2	47.6	92.6	96.3	88.6	58.4	46.6	35.8	32.5	24.1	16.4
1984	28.5	46.5	91.4	95.3	88.5	58.6	43.1	37.7	31.4	22.5	17.2
1985	29.2	49.5	93.9	94.9	88.6	59.7	45.7	38.3	33.8	22.4	15.7
1986	29.3	49.5	91.8	95.5	89.6	61.0	49.6	36.8	30.6	25.4	16.4
1987	28.6	47.9	91.3	95.4	88.1	62.2	48.8	42.3	34.9	23.2	17.2
1988	27.6	49.2	92.6	94.6	88.8	62.8	47.8	42.1	36.0	25.4	17.1
1989	27.1	51.2	91.8	96.0	89.6	61.6	50.6	39.0	38.0	27.9	18.5
1990	32.6	56.1	93.2	95.6	89.5	64.4	50.6	42.9	36.4	28.1	19.2

NOTE: School includes nursery school but excludes day-care centers. School includes 2- and 4-year colleges and universities, but excludes schools with programs strictly less-than-2-years.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

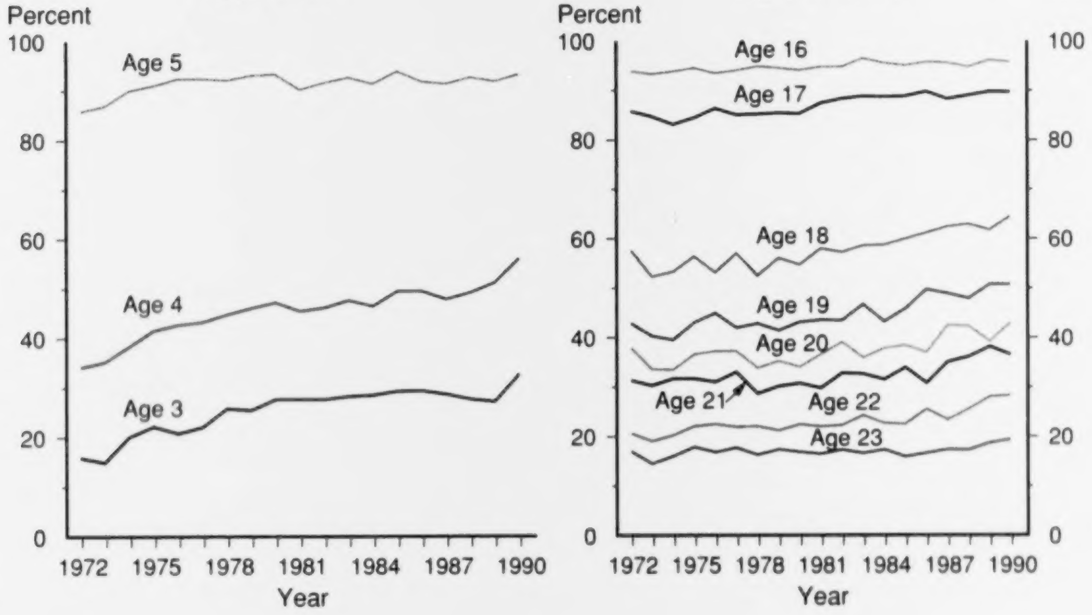
Percentage of population enrolled in school, by age: October 1972–1990

By selected years



Ages 3 to 5

Ages 16 to 23



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Enrollment rates in preprimary education

- In 1989, 36 percent of all 3- to 4-year-olds were enrolled in pre-K, and 80 percent of all 5-year-olds were enrolled in kindergarten.

- During the 1970s, white and black pre-K enrollment rates were similar for 3- to 4-year-olds. In the 1980s, however, white enrollment rates in pre-K continued to increase while those of blacks and Hispanics were generally stable. By 1989, average white enrollment rates in pre-K were about 10 percentage points higher than those of blacks and about 20 percentage points higher than those of Hispanics. However, some of the difference between blacks and whites is due to higher enrollment rates by blacks of this age group in kindergarten.

Within most groups in the population, an increasing percentage of children is receiving preprimary (i.e., prekindergarten and kindergarten) instruction. This expansion may augment the readiness of children for elementary schooling. As the demand for prekindergarten (pre-K) and kindergarten services increases, educators and policymakers must have reliable enrollment data to analyze trends and anticipate needs.

- In 1974, enrollment rates in kindergarten for white 5-year-olds were 9 percentage points higher than those for blacks and 8 percentage points higher than those for Hispanics. By 1989, black and Hispanic enrollment rates were not significantly different from those of whites.

Enrollment rates (percentage enrolled) in preprimary education, by age, level, and race/ethnicity: October 1974–1989 (3-year average)

	3- to 4-year-olds in prekindergarten				5-year-olds in kindergarten			
October*	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1974	21.3	21.6	21.1	15.6	76.0	77.7	69.2	69.5
1975	23.0	23.6	22.2	15.8	77.7	79.3	71.4	74.1
1976	24.1	24.7	23.9	15.4	78.7	80.0	73.8	76.0
1977	25.4	26.1	25.8	15.4	78.9	79.9	74.6	78.5
1978	27.3	27.9	27.6	16.2	79.1	80.4	74.6	76.6
1979	29.2	29.8	28.9	20.9	80.0	81.5	74.7	77.5
1980	29.7	30.7	28.0	20.6	80.0	81.8	75.5	73.1
1981	30.4	32.3	28.4	18.7	80.2	81.9	76.1	74.0
1982	30.6	32.8	28.7	15.7	79.2	80.8	75.1	74.5
1983	30.7	32.9	28.9	15.3	79.5	80.7	76.0	76.6
1984	31.2	33.6	28.7	17.4	80.1	81.5	76.5	76.9
1985	31.9	34.6	28.6	19.2	81.4	82.6	79.4	77.6
1986	32.4	35.5	27.4	20.3	81.0	81.6	82.1	76.3
1987	32.5	36.1	25.9	18.7	80.4	81.1	80.6	77.5
1988	33.0	36.8	26.7	18.0	79.3	80.1	79.1	75.8
1989	36.0	39.9	30.4	19.6	79.6	80.7	77.6	77.8

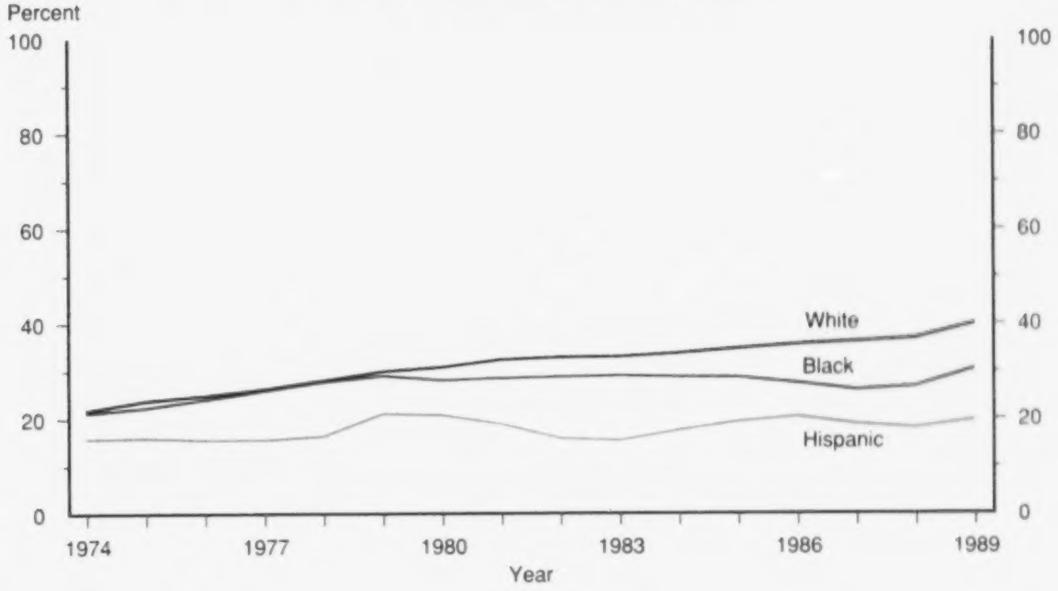
* Three-year moving average. For example, the 3-year average percentage for 1988 is the average of the percentages for 1987, 1988, and 1989. (Three-year averages are used to remove wide yearly fluctuations in race-specific data based on small samples.)

NOTE: Total enrollment rates for age groups are higher than those presented here. Three- and 4-year-olds, for example, are sometimes enrolled in kindergarten, while 5-year-olds are also enrolled in pre-K and the first or second grade.

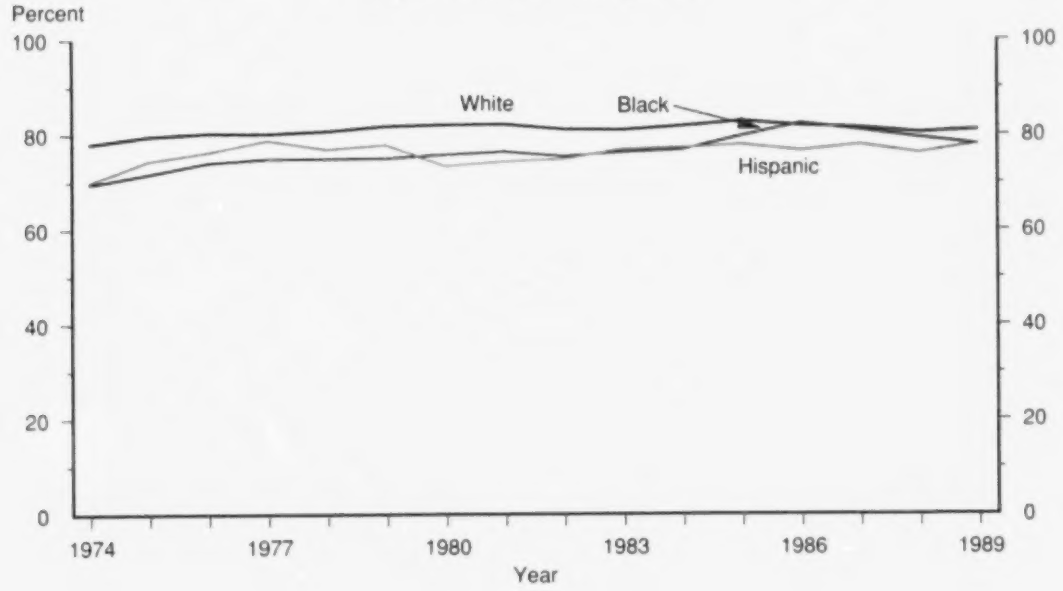
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Enrollment rates in preprimary education, by age, level, and race/ethnicity: 1974–1989

3- to 4-year-olds in pre-kindergarten



5-year-olds in kindergarten



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Enrollment below modal grade for 8- and 13-year-olds

- **The overall percentage of 8-year-old males and females below modal grade has risen by about 10 percentage points since 1974. The percentage of male 13-year-olds below modal grade has risen by 9 percentage points, and 13-year-old females by almost 8 percentage points.**
- **Overall, a greater percentage of males than females (both 8- and 13-year-olds) was below modal grade in 1989.**
- **For both male and female 13-year-olds, blacks and Hispanics were more likely to be below modal grade than whites.**

Modal grade refers to the grade in which most children of an age are enrolled. For example, the modal grade for 8-year-olds in October is third grade, and the modal grade for 13-year-olds in October is grade 8. The Carnegie Council on Adolescent Development and others have stated that students falling below their modal grade are more susceptible to dropping out of school than those in the modal grade.

Percentage of 8-year-olds 1 or more years below modal grade, by race/ethnicity and sex : Selected years 1974–1989 (3-year average)

	Total		White		Black		Hispanic	
Year	Male	Female	Male	Female	Male	Female	Male	Female
1974	17.8	12.2	16.7	10.9	21.0	14.4	27.2	23.1
1976	16.6	12.6	16.6	11.3	16.9	15.1	18.7	22.1
1978	18.6	13.1	17.6	12.3	21.5	14.3	24.0	23.1
1980	20.7	15.1	19.9	14.2	21.8	15.6	29.0	24.3
1982	23.0	16.5	22.8	15.2	22.8	18.2	26.1	23.1
1984	24.2	17.6	24.1	15.9	26.8	19.2	23.1	27.3
1986	25.6	19.4	25.7	18.0	29.6	23.7	24.0	21.1
1988	28.0	21.0	28.1	20.4	26.8	24.7	31.7	20.2
1989	28.1	21.7	27.9	20.6	27.0	25.4	32.7	25.5

Percentage of 13-year-olds 1 or more years below modal grade, by race/ethnicity and sex : Selected years 1974–1989 (3-year average)

	Total		White		Black		Hispanic	
Year	Male	Female	Male	Female	Male	Female	Male	Female
1974	26.9	18.1	24.1	15.3	41.7	27.0	35.4	33.5
1976	24.0	16.7	22.6	14.1	29.6	24.2	34.5	29.9
1978	23.6	16.6	21.6	13.8	32.9	26.3	32.5	30.3
1980	25.8	18.6	23.0	15.7	37.2	26.8	35.3	33.5
1982	30.3	21.1	26.8	17.8	44.6	30.8	41.3	33.5
1984	32.4	22.4	27.9	18.9	46.7	32.1	49.4	36.5
1986	32.9	24.2	28.2	20.0	43.8	35.5	50.0	35.2
1988	35.3	24.8	31.8	20.7	45.4	35.9	46.6	36.3
1989	35.9	25.6	32.4	21.1	49.2	38.0	42.9	37.8

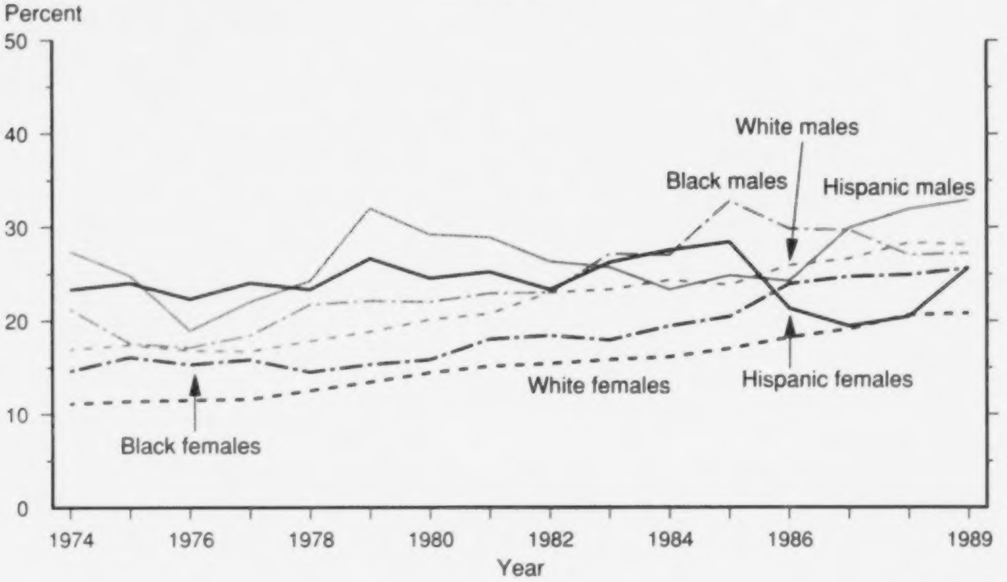
* Three-year average. For example, the 3-year average percentage for 1985 is the average of the percentages for 1984, 1985, and 1986. (Three-year averages are used to remove wide yearly fluctuations in race-specific data based on relatively small samples.)

NOTE: Data revised from previously published figures. Modal grade in October for 8-year-olds is third grade; for 13-year-olds, it is eighth grade.

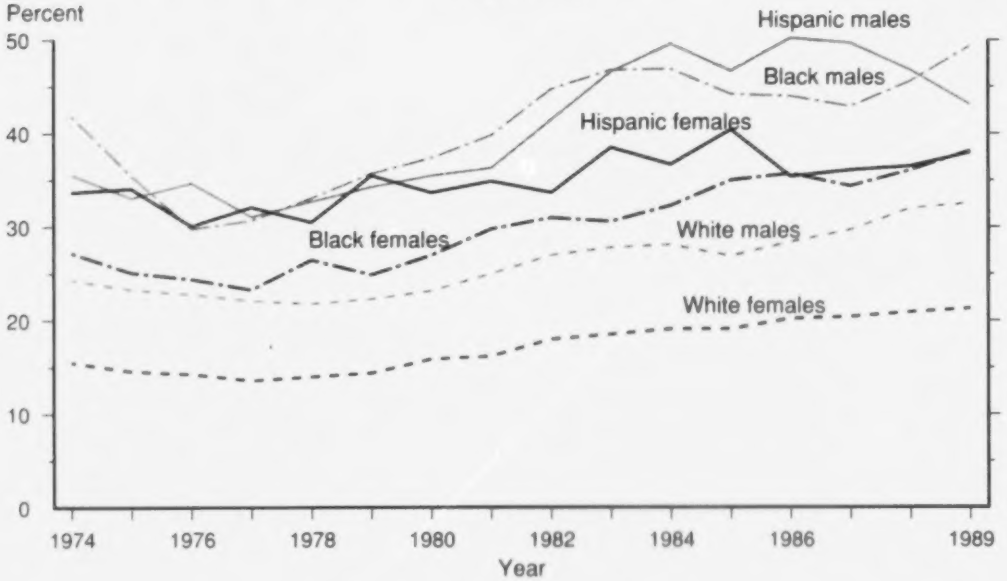
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Enrollment below modal grade for 8- and 13-year-olds, by race/ethnicity and sex: 1974-1989 (3-year average)

8-year-olds



13-year-olds



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Enrollment below modal grade for language minority students

- **Between 1979 and 1989, the total number of children 8-15 years old enrolled in U.S. schools who spoke a language other than English at home increased by 863,000, or 41 percent, compared to a 4 percent decline in overall enrollment over the same period.**
- **As of 1989 for 8- to 15-year-olds, children who spoke other languages at home as a group, and those who were limited-English-proficient were as likely as all children 8–15 years old to be enrolled below modal grade.**
- **In 1979, 25 percent of all children were enrolled below modal grade; by 1989, this figure had increased by 10 percentage points.**
- **Among all limited-English-proficient students*, the percentage of students enrolled below modal grade decreased by 15 percentage points between 1979 and 1989.**

U.S. schools have traditionally enrolled large numbers of students from non-English language backgrounds. These students might be at a disadvantage in education relative to their English-speaking counterparts. They present important challenges to schools educating students from varied cultural and language backgrounds.

Children, 8- to 15-years-old, enrolled in school, number and percentage below modal grade, by selected language characteristics: 1979 and 1989

	1979			1989		
	Enrolled in school	Number below modal grade	Percent below modal grade	Enrolled in school	Number below modal grade	Percent below modal grade
	(in thousands)			(in thousands)		
All children	26,741	6,650	24.9	25,572	8,863	34.7
Speak language other than English at home						
Total[1]	2,098	734	35.0	2,961	1,075	36.3
Spanish	1,414	557	39.4	1,896	756	39.9
All other European languages	430	88	20.3	278	74	26.7
Asian languages	156	52	33.2	429	120	28.0
All other languages	66	(2)	(2)	222	78	35.2
Limited-English-proficient						
Total	555	291	52.5	830	313	37.7
Spanish	442	230	52.1	576	242	42.1
All other European languages	33	(2)	(2)	73	(2)	(2)
Asian languages	61	(2)	(2)	118	39	32.8
All other languages	19	(2)	(2)	63	(2)	(2)

[1] Includes some children for whom a specific language was not reported.

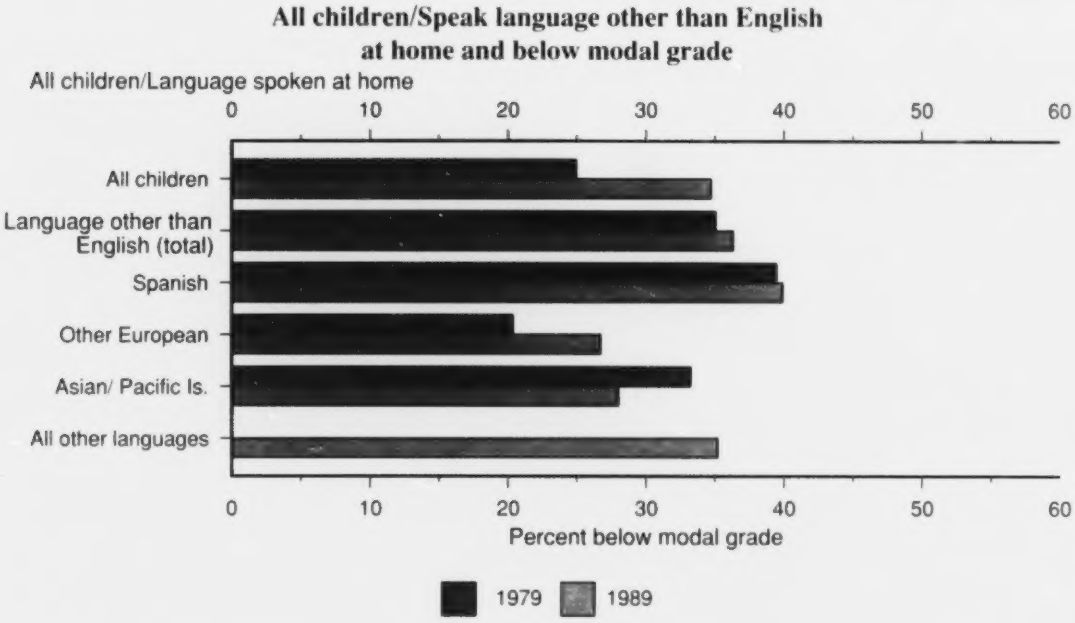
[2] Too few sample observations for a reliable estimate.

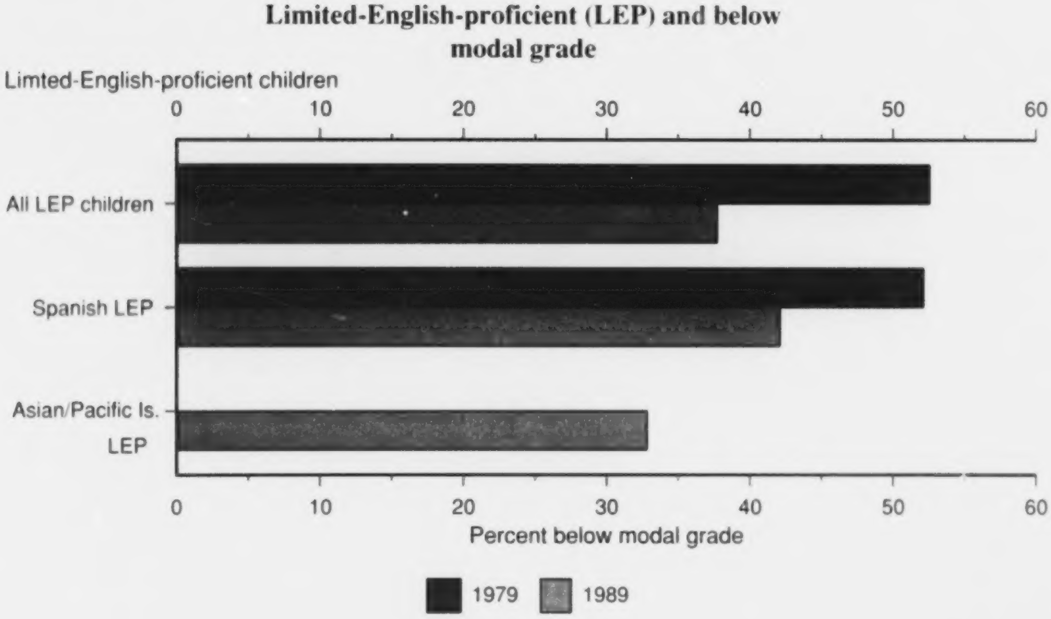
NOTE: Modal grade refers to the grade in which most children of an age are enrolled. For example, modal grade for 8-year-olds in October is third grade; for 13-year-olds it is eighth grade. See also *Indicator 5*.

* For the purpose of this indicator, limited English proficiency is derived from a person's own responses to a survey question on English ability. Persons who were reported to speak English less than "very well" were considered to be limited English proficent. See supplementary note for more discussion.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October and November Current Population Survey, 1979 and 1989.

Percentage of children 8 to 15 years old who are below modal grade for their age, by language spoken at home: 1979 and 1989





SOURCE: U.S. Department of Commerce, Bureau of the Census, October and November Current Population Survey, 1979 and 1989.

Persistence in school

- **Between 1989 and 1990, 96 percent of 15- to 24-year-olds in grades 10-12 stayed in school or completed high school. The other side of this statement is that 4 percent dropped out before completion.**
- **In October 1990, 82 percent of college students who had been enrolled in their 1st, 2nd, or 3rd year of college the previous October were still enrolled.**
- **Between 1972 and 1990, the high school persistence rate for blacks gradually increased.**
- **Persistence rates among college students at each level increased through the 1970s and 1980s (supplemental table 5-2).**

A measure of persistent attendance is the proportion of students enrolled in 2 consecutive years. Students who do not complete high school face a decreased opportunity for assuming a successful and fully functional place in the American workplace and society at large. Persistent attendance is strongly associated with completing high school. In college, both persistent attendance and full-time attendance are strongly associated with completion of a 4-year degree. Those who attend part-time or stop out (i.e. have periods of nonattendance) are less likely to complete a degree.

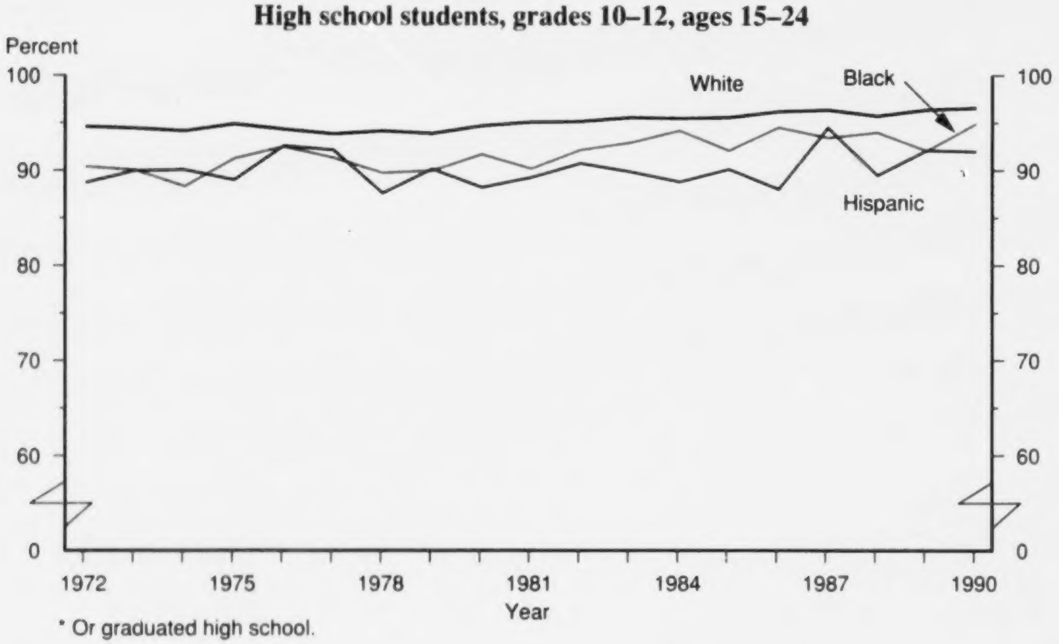
Percentage of high school and college students enrolled the previous October who are enrolled again the following October: 1973–1990

	High school students, grades 10–12, ages 15–24				College students, 1st–3rd years, ages 16–24			
Year	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1972	93.9	94.7	90.5	88.8	77.7	78.1	71.3	78.1
1973	93.7	94.5	90.1	90.0	76.7	76.8	77.2	73.8
1974	93.3	94.2	88.4	90.1	77.5	77.4	74.3	76.0
1975	94.2	95.0	91.3	89.1	79.3	79.9	77.0	72.8
1976	94.1	94.4	92.6	92.7	79.2	79.3	81.3	74.9
1977	93.5	93.9	91.4	92.2	79.2	79.3	79.1	75.9
1978	93.3	94.2	89.8	87.7	77.7	77.8	75.3	76.7
1979	93.3	94.0	90.1	90.2	77.8	78.4	73.6	72.4
1980	93.9	94.8	91.8	88.3	79.0	80.2	71.0	69.2
1981	94.1	95.2	90.3	89.3	78.0	79.4	72.3	72.5
1982	94.5	95.3	92.2	90.8	80.4	81.2	74.6	77.4
1983	94.8	95.6	93.0	89.9	80.3	81.1	74.8	74.4
1984	94.9	95.6	94.3	88.9	79.1	79.8	74.2	72.8
1985	94.8	95.7	92.2	90.2	79.7	81.0	71.4	67.7
1986	95.3	96.3	94.6	88.1	80.2	80.5	74.4	81.7
1987	95.9	96.5	93.6	94.6	81.3	82.9	69.6	74.9
1988	95.2	95.8	94.1	89.6	83.0	83.7	78.0	77.0
1989	95.5	96.5	92.2	92.2	83.8	84.3	79.0	81.1
1990	96.0	96.7	95.0	92.1	81.8	81.7	79.4	79.7

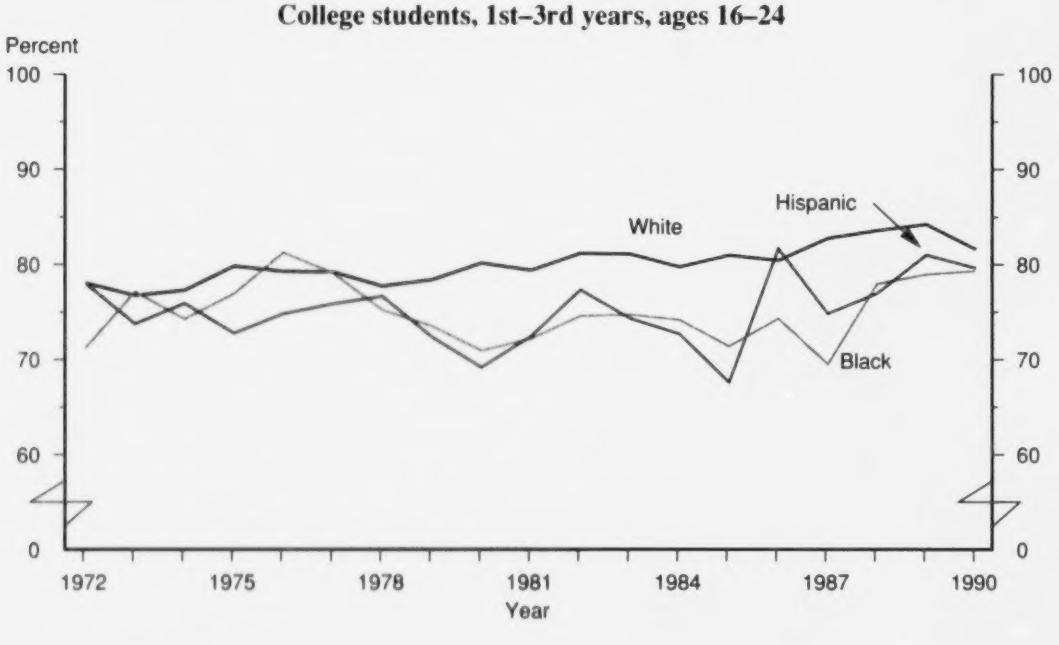
NOTE: See supplemental note to *Indicator 5* for details on how the persistence rates in this table are calculated. Not shown separately but included in the total are non-Hispanics who are neither black nor white. Data for 1987 through 1990 reflect new editing procedures instituted by the Bureau of the Census for cases involving missing school enrollment items.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of high school and college students enrolled in the previous October and enrolled again the following October*, by race/ethnicity: 1972–1990



* Or graduated high school.



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Dropouts and late completers

- **Overall, between the eighth and tenth grades, 7 percent of the eighth-grade class of 1988 dropped out of school. Earlier in the decade, between the tenth and the twelfth grades, 17 percent of the sophomore class of 1980 dropped out of high school.**
- **More than 4 in 5 members of the sophomore class of 1980 completed high school on time. Of those who did not, almost half had received a high school diploma or an equivalency certificate by 1986.**

Dropping out of school occurs for a variety of reasons and at various times. Many dropouts later complete their high school education, either by returning to school to earn a diploma or obtaining an alternative credential. Such actions lessen the consequences of dropping out of school.

- **Among the sophomore class of 1980, white and Asian students were more likely to complete high school on time (in 1982) than black or Hispanic students. Only a small part of the gap in 1982 was reduced by the higher percentages of late completers (between 1982–1986) among blacks and Hispanics than among whites and Asians.**

Dropout rates between eighth and tenth grades for eighth-grade cohort: 1988–1990, and between tenth and twelfth grades for sophomore cohort: 1980–1982, and completion rates for 1980 sophomore class cohort, by various background, and school variables

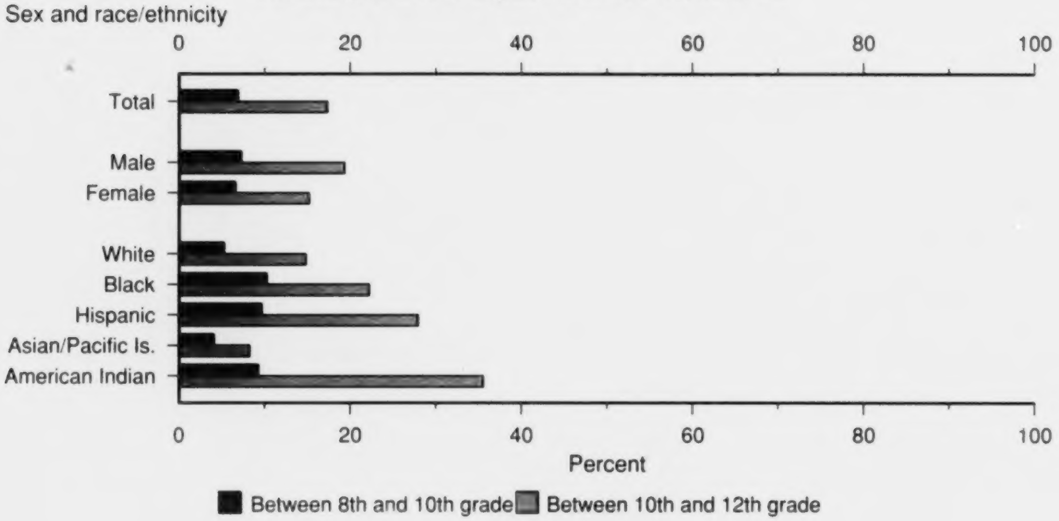
	Dropout rates		Completion rates for sophomore class of 1980		
Characteristic	Between the eighth and tenth grades, 1988–1990	Between the tenth and twelfth grades, 1980–1982	Completed on time (June 1982)	Completed between 1982–1986	Completion rate 1986
Total	6.8	17.3	82.7	8.0	90.7
Sex					
Male	7.2	19.3	80.7	9.2	89.9
Female	6.5	15.2	84.8	6.9	91.7
Race/ethnicity*					
White	5.2	14.8	85.2	7.2	92.4
Black	10.2	22.2	77.8	10.8	88.6
Hispanic	9.6	27.9	72.1	9.9	82.0
Asian/Pacific Is.	4.0	8.2	91.8	6.2	98.0
American Indian	9.2	35.5	64.5	8.4	72.9
Metropolitan status					
Urban	8.9	24.5	75.5	10.9	86.4
Suburban	5.4	15.1	84.9	8.0	92.9
Rural	7.1	15.6	84.4	6.1	90.5
Region					
Northeast	5.9	13.7	86.3	7.5	93.8
Midwest	5.5	14.8	85.2	6.0	91.2
South	8.9	19.5	80.5	9.1	89.6
West	5.8	21.7	78.3	9.9	88.2
School control					
Public	7.6	18.3	81.7	8.4	90.1
Catholic	1.3	4.9	95.1	3.3	98.4
Other private	0.4	10.9	89.1	7.3	96.4

* For dropout rates between eighth and tenth grades, not shown separately are 434 persons whose race/ethnicity are unknown.

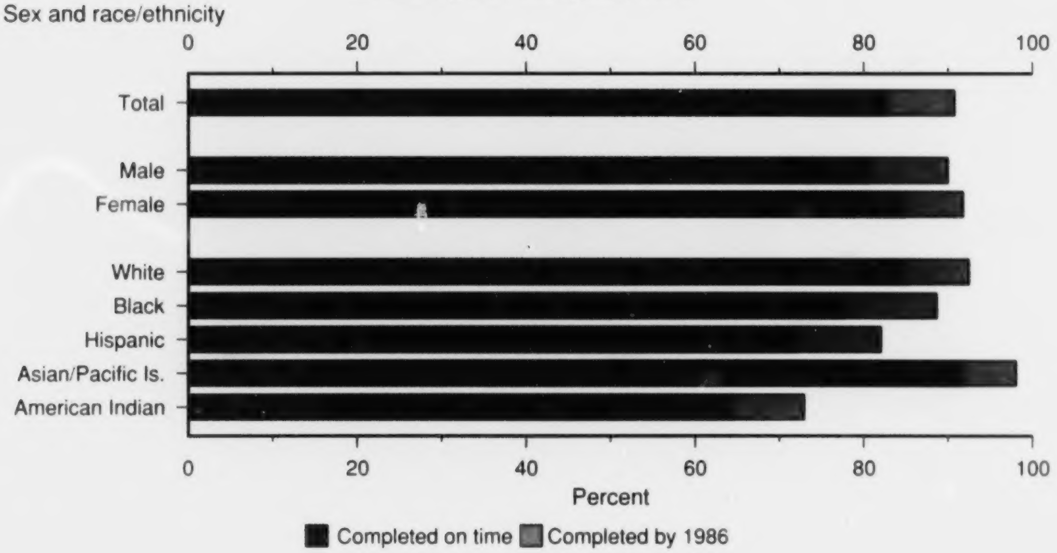
SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond, National Educational Longitudinal Study of 1988, *Dropout Rates in the United States: 1988*, tables 15 and 16, and *Dropout Rates in the United States: 1990*, table 8.

Dropout and completion rates, by sex and race/ethnicity

Dropout rates between eighth and tenth grades for eighth-grade cohort, 1988-90; and tenth and twelfth grades for sophomore cohort, 1980-82



Completion rates for 1980 sophomore cohort: on-time (June 1982) and 1986



SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond, National Educational Longitudinal Study of 1988, *Dropout Rates in the United States: 1988*, tables 15 and 16, and *Dropout Rates in the United States: 1990*, table 8.

Immediate transition from high school to college

- **Among 1990 high school graduates, 3 out of 5 were enrolled in college in October 1990—one in a 2-year college and two in a 4-year college.**
- **Between 1973 and 1990, the percentage of high school graduates going directly to college increased from 47 percent to 60 percent.**
- **The percentage of black high school graduates going directly to college was greater in 1989 (48 percent) than it had been in 1974 (40 percent). However, in the late 1980s blacks and Hispanics were about equally likely to go directly to college and both were still less likely than whites (62 percent) to do so.**

Most college students enroll immediately after finishing high school. So the percentage of high school graduates enrolled in college in the October following graduation is a leading indicator of the total proportion who will eventually enroll. The percentage enrolling is a measure of the accessibility of postsecondary education to high school graduates.

- **Female high school graduates in 1988, 1989, and 1990 were more likely than their male counterparts to go directly to college. In the mid 1970s, the reverse was the case.**

Percentage of high school graduates enrolling in college in October following graduation, by sex, type of college, and race/ethnicity: 1973–1990

		Male			Female			Race/ethnicity[1]			
Year	Total	Total	2-year	4-year	Total	2-year	4-year	White	Black	Hispanic	Other[2]
1973	46.6	50.0	14.6	35.4	43.4	15.2	28.2	—	—	—	—
1974	47.6	49.4	16.6	32.8	45.9	13.9	32.0	48.7	40.5	53.1	69.3
1975	50.7	52.6	19.0	33.6	49.0	17.4	31.6	49.1	44.5	52.7	67.7
1976	48.8	47.2	14.5	32.7	50.3	16.6	33.8	50.3	45.3	53.6	57.3
1977	50.6	52.1	17.2	35.0	49.3	17.8	31.5	50.1	46.8	48.8	61.1
1978	50.1	51.1	15.6	35.5	49.3	18.3	31.0	50.4	47.5	46.1	56.4
1979	49.3	50.4	16.9	33.5	48.4	18.1	30.3	50.1	45.2	46.3	60.5
1980	49.3	46.7	17.1	29.7	51.8	21.6	30.2	51.5	44.0	49.6	64.3
1981	53.9	54.8	20.9	33.9	53.1	20.1	33.0	52.4	40.3	48.7	72.7
1982	50.6	49.1	17.5	31.6	52.0	20.6	31.4	54.2	38.8	49.4	69.0
1983	52.7	51.9	20.2	31.7	53.4	18.4	35.1	55.5	38.0	46.7	60.9
1984	55.2	56.0	17.7	38.4	54.5	21.0	33.5	57.9	39.9	49.3	60.1
1985	57.7	58.6	19.9	38.8	56.8	19.3	37.5	58.6	39.5	46.1	66.2
1986	53.8	55.8	21.3	34.5	51.9	17.3	34.6	58.5	43.5	42.3	72.5
1987	56.8	58.3	17.3	41.0	55.3	20.3	35.0	58.8	44.2	45.0	73.4
1988	58.9	57.1	21.3	35.8	60.7	22.4	38.3	60.1	49.7	48.5	73.9
1989	59.6	57.6	18.3	39.3	61.6	23.1	38.5	61.6	48.0	52.7	72.6
1990	60.1	58.0	19.6	38.4	62.2	20.6	41.6	—	—	—	—

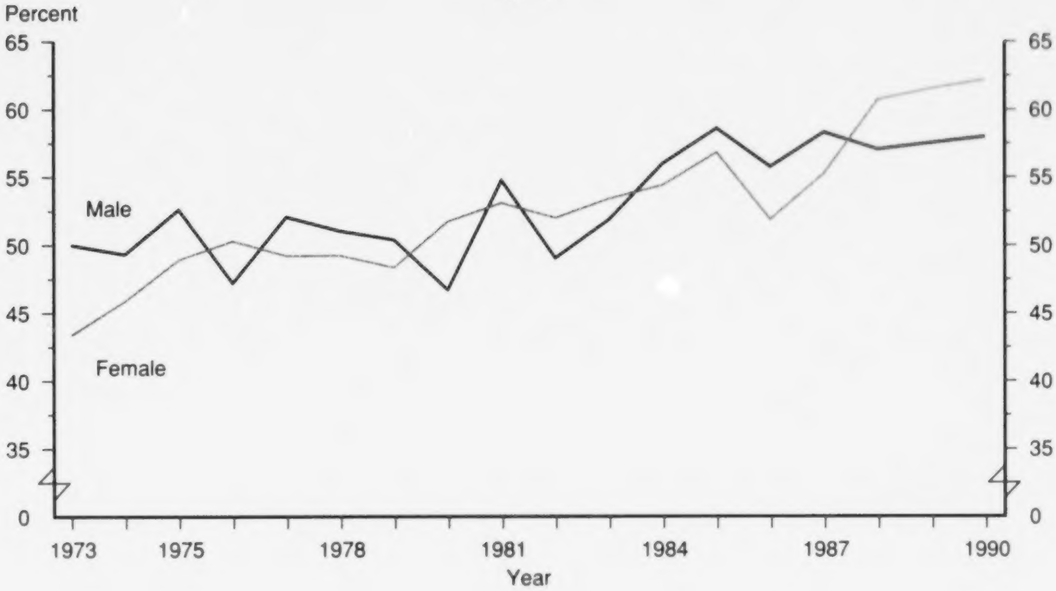
[1] Due to small sample sizes for the Black, Hispanic, and Other categories, 3-year averages are calculated. The 3-year average for 1989 is the average percentage enrolling in college in 1988, 1989, and 1990.

[2] Includes individuals who are not Hispanic, white, or black; most are Asian and some are American Indian.

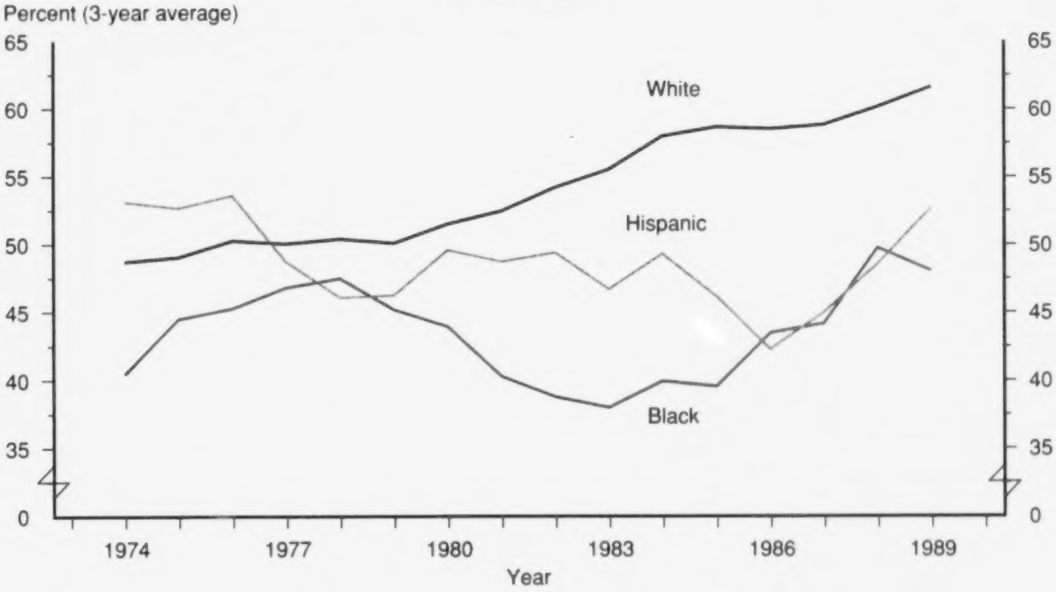
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Percentage of high school graduates enrolling in college in October following graduation: 1973–1990

By sex



By race/ethnicity



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Participation in undergraduate higher education

- **In 1990, a larger percentage of male than female high school graduates 16 to 24 years old attended 4-year colleges. Similar percentages attended 2-year colleges.**
- **While the overall percentage of 16- to 24-year-olds attending college at the undergraduate level was fairly level through the 1970s at about 28 to 30 percent, through the 1980s this figure increased to 37 percent in 1990. Most of the observed increase was in attendance at 4-year institutions (supplemental table 8-1).**
- **College attendance rates among 25- to 34-year-olds have remained level since the mid 1970s.**
- **Over the last two decades, differences between males and females in college enrollment rates generally has been closed, especially during the 1970s (supplemental table 8-2).**

The enrollment rate among high school graduates in a broad age group is an indicator of participation in postsecondary education that captures those who delay enrollment after leaving high school. Those pursuing postgraduate studies are excluded from this measure. Traditionally, college students have been under 25 years old. The participation rate of 25- to 34-year-olds reflects the degree to which individuals change careers or take advantage of educational opportunities they neglected at a younger age.

Percentage of high school graduates 16- to 34-years-old enrolled as undergraduates in college, by sex, age, and type of college: 1973–1990

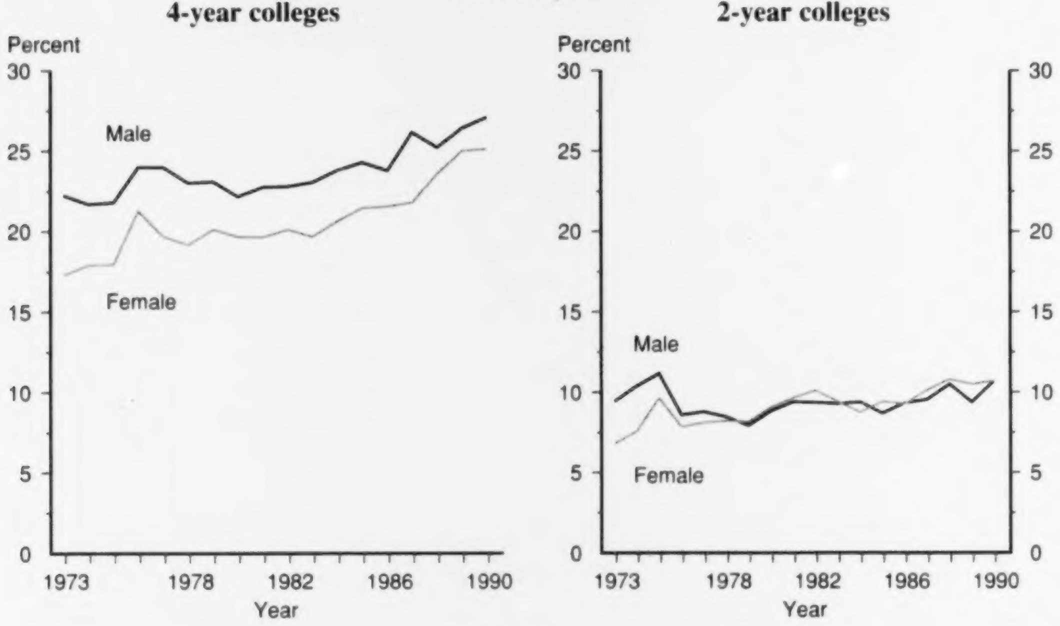
	Male high school graduates				Female high school graduates			
	16-24 years old		25-34 years old		16-24 years old		25-34 years old	
Year	2-year	4-year	2-year	4-year	2-year	4-year	2-year	4-year
1973	9.4	22.2	3.1	2.9	6.7	17.3	2.0	1.2
1974	10.3	21.6	4.2	2.8	7.5	17.9	2.3	1.6
1975	11.1	21.7	5.1	2.7	9.6	17.9	2.7	1.9
1976	8.5	23.9	3.4	3.6	7.8	21.2	2.4	1.9
1977	8.7	23.9	3.2	3.5	8.1	19.6	2.9	2.5
1978	8.4	23.0	2.9	2.9	8.2	19.1	2.3	2.6
1979	7.9	23.1	2.2	3.0	8.1	20.1	2.7	2.5
1980	8.8	22.1	2.3	2.6	9.0	19.6	3.1	2.5
1981	9.4	22.7	2.3	3.0	9.6	19.6	3.0	2.7
1982	9.3	22.8	2.4	2.7	10.1	20.1	3.0	2.3
1983	9.2	23.0	2.7	2.8	9.4	19.6	2.9	2.6
1984	9.3	23.7	2.3	2.6	8.7	20.6	2.8	2.7
1985	8.6	24.2	2.1	2.7	9.4	21.4	3.3	2.6
1986	9.3	23.7	2.2	2.7	9.2	21.5	3.0	2.7
1987	9.5	26.1	2.0	2.7	10.1	21.8	2.6	2.7
1988	10.4	25.2	1.7	2.9	10.8	23.5	2.9	2.5
1989	9.3	26.4	1.9	2.6	10.5	25.0	2.7	3.0
1990	10.7	27.0	1.9	2.7	10.7	25.1	3.3	3.2

NOTE: Undergraduates are persons enrolled in the 1st through 4th years of college. Persons not reporting the type of college they are attending have been allocated to the 2-year and 4-year categories in proportion to those who did report their college type.

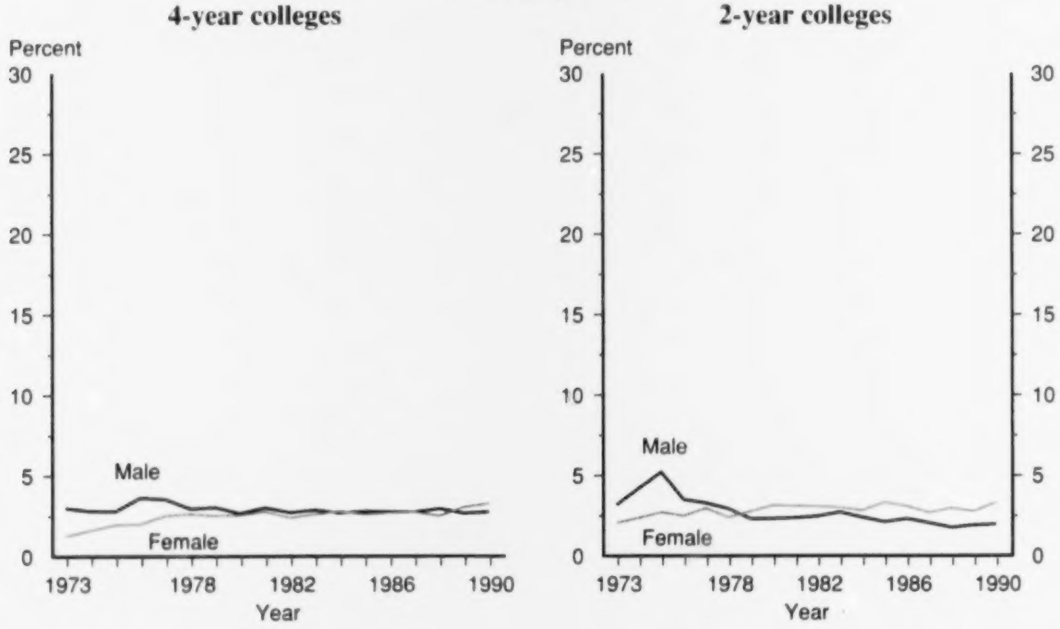
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of high school graduates 16 to 34 years old enrolled in college as undergraduates: 1973–1990

16- to 24-year-olds



25- to 34-year-olds



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Participation in undergraduate higher education, by race/ethnicity

- **Among 16- to 24-year-old high school graduates, the percentage of white males, white females, and black males enrolled in college as undergraduates increased 8 percentage points during the 1980s; for black females, Hispanic males, and Hispanic females there was no change in this college attendance rate.**
- **In 1990, among 16- to 24-year-old high school graduates, there was no difference between males and females within each of the three groups—whites, blacks, or Hispanics.**
- **In 1990, among 25- to 34-year-old high school graduates, both white females and black females were more likely to be enrolled in college as undergraduates than their male counterparts.**

Race differences in college enrollment rates may reflect differences in access to and persistence in higher education for groups with varying social and economic backgrounds. Differing rates are also a leading indicator of future differences in earnings and productivity that are associated with postsecondary education.

Percentage of high school graduates 16 to 34 years old enrolled as undergraduates in college, by age, race/ethnicity, and sex: 1973–1990

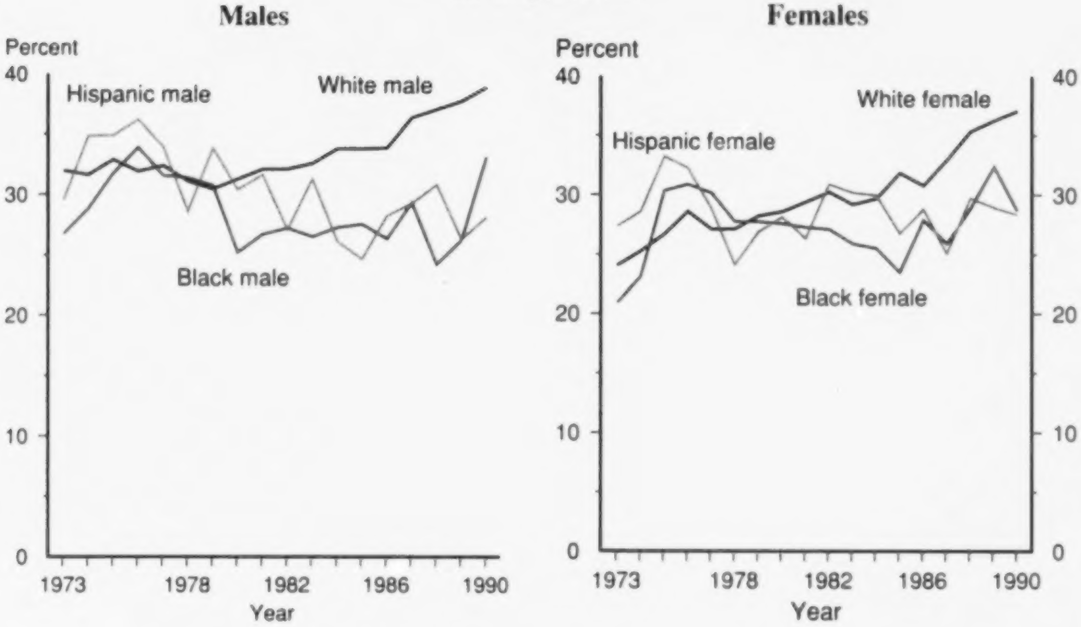
	16- to 24-year old high school graduates						25- to 34-year old high school graduates					
	White		Black		Hispanic		White		Black		Hispanic	
Year	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1973	32.0	24.1	26.8	20.9	29.5	27.3	5.8	3.0	7.2	4.9	10.3	3.1
1974	31.6	25.3	28.8	23.1	34.8	28.6	6.6	3.6	10.3	6.0	7.5	5.3
1975	32.9	26.7	31.7	30.3	34.9	33.2	7.2	4.2	11.4	7.7	14.7	5.2
1976	31.9	28.6	33.9	30.9	36.2	32.2	6.3	4.0	10.8	7.4	12.7	5.2
1977	32.4	27.1	31.5	30.1	33.9	28.8	6.1	4.7	11.7	10.0	10.0	7.3
1978	31.1	27.1	31.4	27.7	28.6	24.1	5.3	4.5	8.4	8.5	9.3	5.3
1979	30.5	28.2	30.7	27.7	33.8	26.9	4.8	4.9	6.6	7.3	9.7	7.7
1980	31.3	28.6	25.2	27.6	30.4	28.1	4.5	5.5	7.1	6.8	7.9	5.3
1981	32.1	29.4	26.7	27.3	31.6	26.3	4.8	5.5	7.4	6.9	8.2	7.2
1982	32.1	30.2	27.2	27.1	27.1	30.9	4.7	4.9	6.3	7.7	7.7	6.3
1983	32.6	29.2	26.5	25.9	31.3	30.2	4.9	5.2	7.2	6.8	8.8	6.5
1984	33.8	29.7	27.3	25.5	26.1	29.9	4.5	5.2	6.3	6.1	7.0	7.9
1985	33.8	31.8	27.5	23.5	24.7	26.7	4.7	5.5	4.2	7.0	5.8	7.8
1986	33.8	30.8	26.3	27.9	28.2	28.8	4.6	5.2	6.1	6.5	5.8	9.8
1987	36.4	32.9	29.4	25.9	29.3	25.1	4.3	5.1	4.6	7.1	8.2	4.7
1988	37.1	35.3	24.2	28.8	30.8	29.7	4.4	5.2	5.0	6.3	5.1	6.5
1989	37.7	36.3	26.2	32.4	26.3	28.9	4.4	5.6	3.3	6.2	5.9	5.8
1990	38.9	37.1	33.1	28.6	28.1	28.3	4.8	6.6	2.8	6.2	4.6	6.0

NOTE: Undergraduates are persons enrolled in their 1st through 4th year of college.

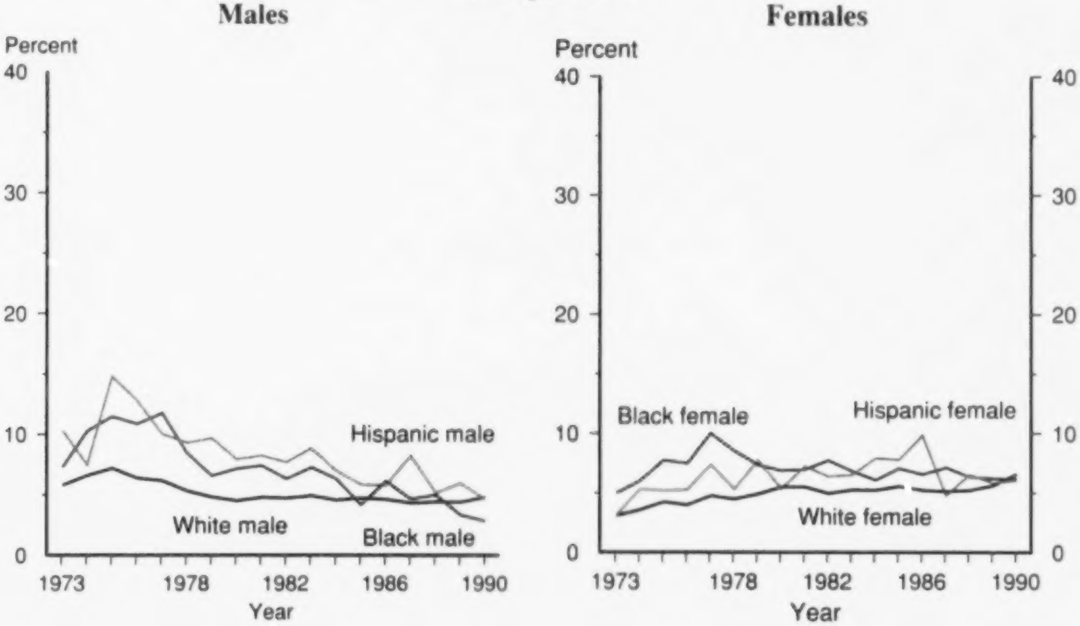
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of high school graduates 16 to 34 years old enrolled in college as undergraduates: 1973–1990

16–24 years old



25–34 years old



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Tuition for private schools

- **Overall, the average tuition for Catholic schools in 1987–1988 was less than that for other religious and nonsectarian schools at both the elementary and secondary levels.**
- **Overall, the tuition of the less expensive nonsectarian secondary schools (i.e., at the 25th percentile) was similar to the tuition in the more expensive (i.e., at 75th percentile) other religious schools and substantially higher than that of the more expensive Catholic secondary schools.**

Private schools provide an alternative to public schools. However, access to this alternative is subject to financial barriers. Average tuition levels are indications of these barriers, unless financial assistance is provided.

- **Among Catholic elementary schools, private Catholic schools charged the highest average tuition; among other religious private elementary schools, affiliated schools charged higher average tuition than unaffiliated schools; and among nonsectarian elementary schools, there was little difference in the average tuition charged by regular and special emphasis schools.**

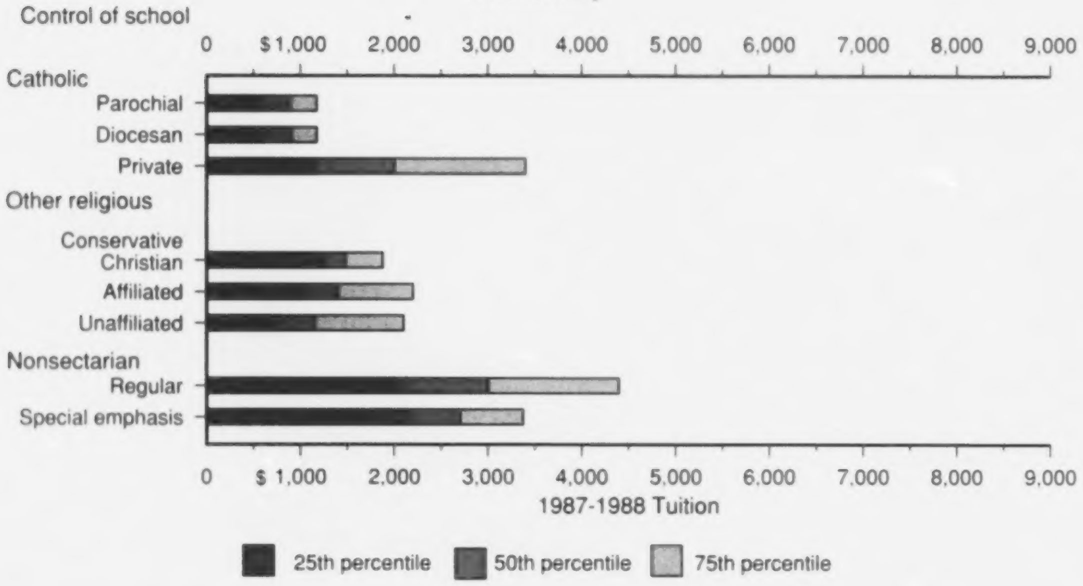
Distribution of private schools, average tuition, and percentile distribution of tuition, by control and level of school: 1987–1988

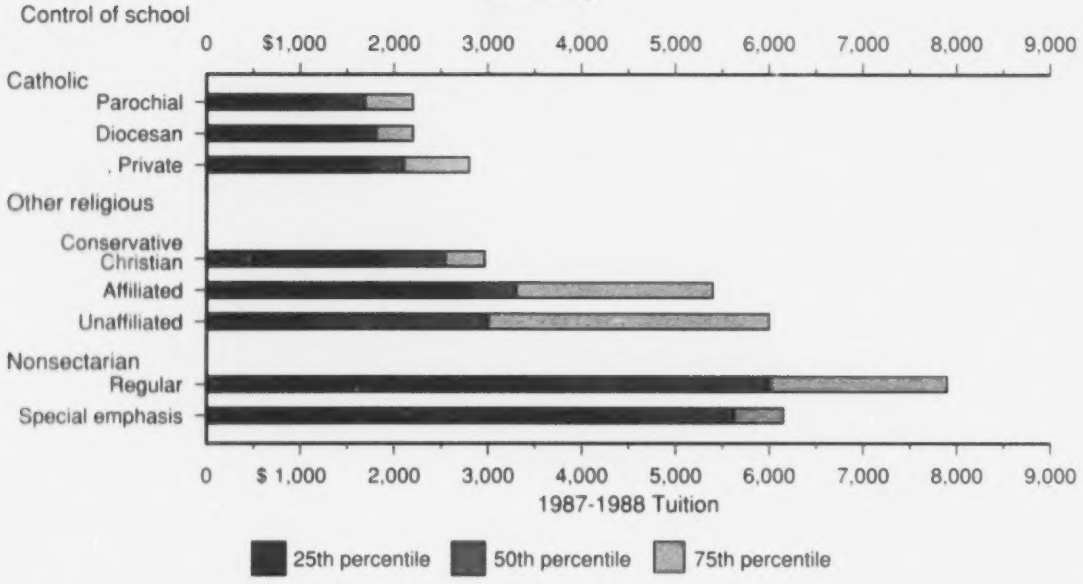
	Elementary schools					Secondary schools				
	Percent of private elementary schools	Private school tuition				Percent of private secondary schools	Private school tuition			
			Percentile					Percentile		
School type		Average	25th	50th	75th		Average	25th	50th	75th
Catholic	46.0	$966	$620	$900	$1,200	58.1	$2,030	$1,500	$1,975	$2,300
Parochial	35.4	910	600	885	1,175	9.3	1,572	1,150	1,680	2,200
Diocesan	8.5	868	625	900	1,175	23.4	1,831	1,545	1,795	2,200
Private	2.1	2,292	1,170	2,000	3,400	25.3	2,384	1,750	2,100	2,800
Other religious	42.5	1,226	1,000	1,395	2,100	23.4	3,170	2,605	3,045	4,700
Conservative Christian	7.4	1,299	1,248	1,475	1,880	6.7	2,376	1,935	2,533	2,970
Affiliated	21.0	1,407	1,000	1,400	2,200	11.9	3,702	2,800	3,300	5,400
Unaffiliated	14.1	917	765	1,151	2,100	4.7	2,960	1,100	3,000	6,000
Nonsectarian	11.4	3,195	2,160	2,850	4,175	18.5	6,255	4,275	5,850	7,900
Regular	6.6	3,203	2,100	3,000	4,400	9.7	5,864	3,800	6,010	7,900
Special emphasis	4.6	2,829	2,155	2,700	3,375	6.3	4,998	4,600	5,625	6,150
Special education	0.3	9,253	5,394	7,235	12,978	2.6	10,836	6,150	12,900	15,842

NOTE: Tuition is in current 1987–1988 dollars. Tuition is the highest tuition charged to a student attending the school. See supplemental note to *Indicator 10.*

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987.

Average tuition and tuition quartiles for private schools: 1987–1988


Elementary


Secondary

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987.

College costs and family income

- **College tuition, room, and board (in constant dollars) fell after 1972, reaching a low point for the 1980-81 academic year; since then, college costs have risen rapidly in both public and private institutions (supplemental table 11-2).**
- **At private colleges, tuition, room, and board grew more rapidly than at public colleges—49 percent versus 26 percent between 1980 and 1990. Median family income has not kept pace; it fell 1 percent over the same period. The income of families at the 25th percentile fell 5 percent over the period, while income of families at the 75th percentile grew 4 percent.**
- **At public institutions, tuition, room, and board increased from 10 percent of median family income in 1980 to 13 percent in 1990. For those at the 25th percentile of family income, public college costs increased from 17 percent of their income in 1980 to 23 percent in 1990; at the 75th percentile, the figures were 7 and 8 percent in 1980 and 1990, respectively (supplemental table 11-1).**

The ability of a family to afford to send its children to college depends on many factors, including tuition levels, availability of financial aid, family income, and family size. Tuition, room, and board are a measure of the gross price of college. Deducting financial aid amounts produces the net price. The average cost for tuition, room, and board as a percentage of family income is an indicator of the financial accessibility of a college education.

Average tuition, room, and board and selected percentiles of family income for families with children 6–17 years old: 1975–1990

	Undergraduate tuition (in-state), room, and board		Percentiles of family income distribution among families with children 6–17 years old*				
Year	Public	Private	10th	25th	50th	75th	90th
				(Constant 1991 dollars)			
1975	$4,210	$9,257	$13,128	$24,907	$39,952	$56,284	$76,187
1976	4,275	9,335	13,425	25,454	41,532	58,055	78,428
1977	4,237	9,330	13,328	25,224	41,728	58,709	78,868
1978	4,157	9,411	13,108	25,445	42,110	58,267	79,496
1979	4,057	9,205	13,522	25,081	41,621	59,744	82,000
1980	3,916	9,027	11,518	22,869	38,926	56,820	77,598
1981	3,983	9,223	11,097	21,731	37,825	55,179	75,338
1982	4,150	9,753	9,836	20,941	36,961	54,818	75,860
1983	4,309	10,252	9,943	20,716	36,784	55,985	77,443
1984	4,462	10,738	10,025	21,410	37,475	57,086	79,663
1985	4,515	11,234	10,347	21,970	38,881	58,019	80,529
1986	4,721	12,006	10,029	21,848	39,198	59,732	83,250
1987	4,848	12,582	9,968	21,950	40,134	61,072	84,769
1988	4,915	12,868	10,505	22,327	40,087	61,079	84,773
1989	4,941	13,185	11,073	22,557	40,091	60,694	86,001
1990	4,946	13,438	10,434	21,784	38,388	59,060	84,136

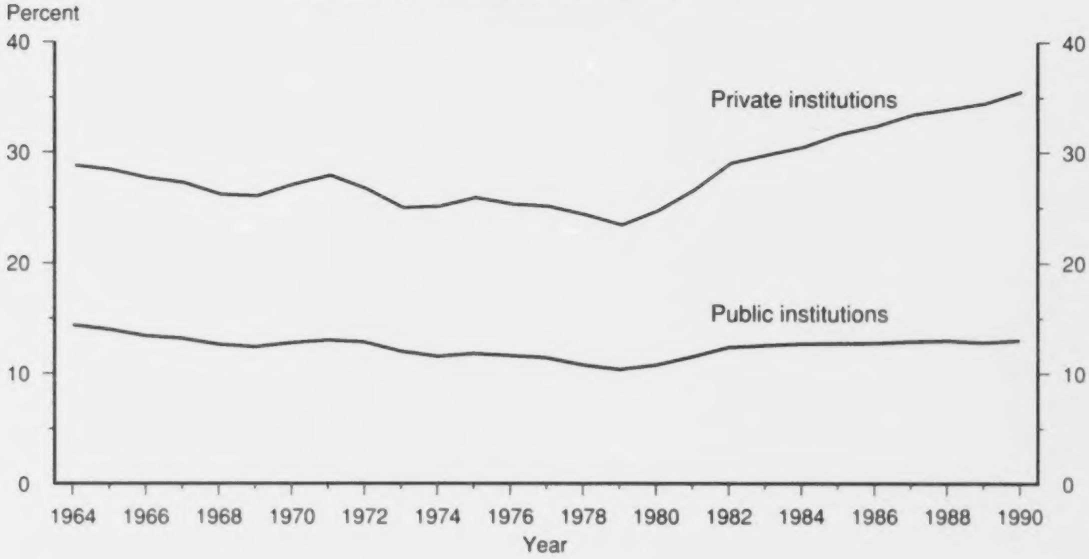
* These families may have children 18 or over; however, there is at least one child between 6 and 17 years old and none under 6. All families, not just married-couple families, are included.

NOTE: Tuition data are for academic years beginning 1975–1990 and family income data are for calendar years 1975–1990. The calendar year Consumer Price Index was used to calculate constant dollar figures.

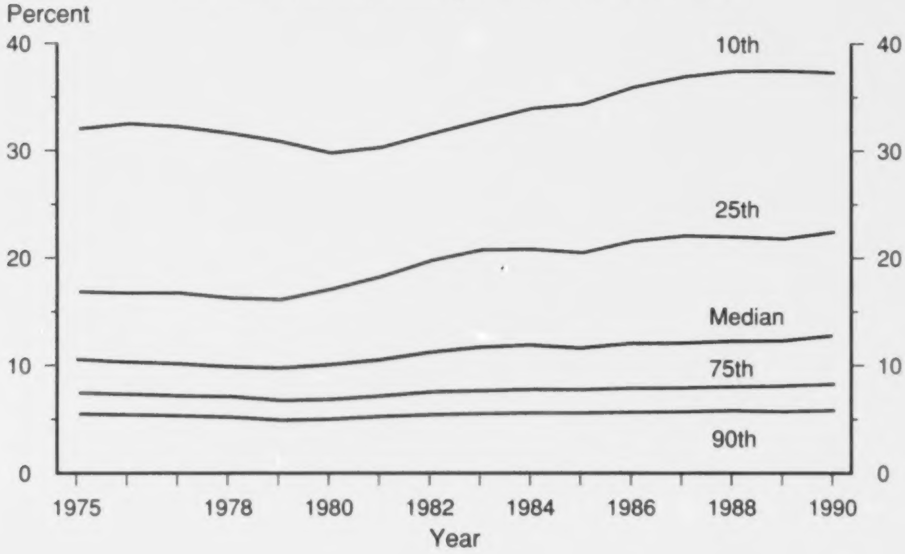
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, Table 291. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, "Money Income of Families and Persons: March . . . ," various years.

Undergraduate tuition, room, and board as a percentage of family income

As a percentage of median income of all families, by control of institution: 1964–1990



For public institutions, as a percentage of income of families with children 6 to 17 years old at selected income percentiles: 1975–1990



NOTE: Year denotes the beginning of the academic year for tuition, *et cetera* and the calendar year for family income.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1990*, Table 291. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, "Money Income of Families and Persons: March . . .," various years.

Achievement, Attainment, and Curriculum

An immediate aim of education is learning. Performance on examinations is one measure of what has been learned. However, examinations do not measure the wide variety of skills and experiences that formal education provides. Educational attainment (e.g. finishing high school or college), is an indirect measure of how much subject matter students potentially have learned as well as how much students have potentially gained in learning civic responsibilities, social and work skills with other people, and life skills. However, students have choices about what they study in high school and college. Information about courses taken and fields of study is an additional indirect indication of the content of a student's knowledge.

Achievement

The National Assessment of Educational Progress (NAEP) has assessed what students know and can do in reading, writing, science, mathematics, and other subjects for the past 20 years. Generally, the evidence shows little overall change. Average reading proficiency among 9- and 13-year-olds was about the same in 1990 as in 1971; among 17-year-olds it was slightly higher in 1991. Average writing proficiency among 4th and 11th graders was about the same in 1990 as in 1984; among 8th graders it was somewhat lower. Average mathematics proficiency among 9- and 13-year-olds was slightly higher in 1990 than in 1973; among 17-year-olds it was about the same. Average science proficiency among 9- and 13-year-olds was the same in 1990 as in 1970; among 17-year-olds it was lower (*Indicators 12, 13, 14, and 15*).

Average scores on the mathematics section of the SAT showed similar patterns of change as did average mathematics proficiency in NAEP. SAT scores fell somewhat during the 1970s and then rose during much of the 1980s. Unlike the NAEP indicates, not all the decline in proficiency during the 1970s was recouped during the 1980s. However, participation in the SAT exam has increased significantly—in 1991 SAT test-takers were 41 percent of high school graduates, up from 33 percent in 1980 (*Indicator 18*). Average scores on the quantitative component of the Graduate Record Exam for U.S. citizens has shown a significant increase since the mid-1970s (Table 19-3).

Although overall scores have not changed much over two decades, NAEP gives evidence that the large gap in achievement between whites and minorities has narrowed substantially. Blacks have improved relative to whites in reading, mathematics, and science. For example, in 1971 average reading proficiency among 17-year-old blacks was well below (52 scale points) 17-year-old whites and also below (22 points) 13-year-old whites; in 1990, the proficiency of 17-year-old blacks was closer (22 points) to that of 17-year-old whites, and slightly higher than 13-year-old whites. The improvement among Hispanics relative to whites was not as widespread as it was among blacks.

The International Assessment of Educational Progress (IAEP) is one method used to compare what young people in the United States have learned compared to young people of the same age in other countries. In most cases, the average percentage on both the math and science assessment for 9- and 13-year-olds is lower in the United States than in Korea, Taiwan, and the former Soviet Union. The exception was 9-year-olds in science where only Korean students out-performed U.S. students. Students in Canada generally scored about the same as U.S. students, except for 13-year-olds in science where Canada did better (*Indicators 16 and 17*).

To put the differences in average performance between the United States and other countries in perspective, compare these differences to differences within the United States between better and poorer performers. For example, among 13-year-olds in mathematics, the average percentage correct was 55 percent in the United States and 73 percent in Korea—an 18 percentage point difference. Within the United States, the average percentage correct was 86 percent at the 90th percentile and 44 percent correct at the 10th percentiles—a 52 percentage points difference (*Indicator 16*).

Substantial variation in average achievement is evident across states within the United States. In 1990, 37 states participated in a NAEP trial assessment to provide state-level estimates of mathematics proficiency of 8th-grade students. Compared to an average proficiency of 261 for the nation, average proficiencies in the 37 states ranged from a high of 281 to a low of 246—a difference of 35 scale points. To understand roughly what these differences mean, compare them to differences in the average mathematics proficiencies of 9-, 13-, and 17-year-olds in 1990 in the country as a whole. Average proficiencies were 230, 270, and 305, respectively, which translates into a difference of about 10 scale points per year of age (*Indicator 14*).

Attainment

Universal completion of high school is a goal among policymakers in the United States. In March 1991, among 25- to 29-year-olds, 85 percent had completed high school, up from 78 percent 2 decades earlier (Table 22-1). Compared to other countries, completion of secondary school in the United States is high—among 25- to 64-year-olds 82 percent have completed high school in the United States, more than in Japan, Germany, France, the United Kingdom, Italy, and Canada (*Indicator 23*). However, reflecting recent trends in these countries, the U.S. advantage among 25- to 34-year-olds is much smaller or reversed. For example, in 1987, in the United States 87 percent of 25- to 34-year-olds had completed high school, somewhat less than the 92 and 91 percent who had done so in Japan and West Germany and slightly higher than the 84 percent who had in Canada.

College attainment rates have increased very little since 1975 in the United States, but are higher than in other large industrialized countries. In 1991, 27 percent of 25- to 29-year-old high school graduates had completed 4 or more years of college, compared to 26 percent in 1975 (Table 22-3). In 1989, 23 percent of 25- to 64-year-olds in the United States had completed higher education, compared to 13 percent in Japan, 10 percent in West Germany, 9 percent in the United Kingdom, 7 percent in France, and 15 percent in Canada. Only in Japan do trends suggest a closing of the gap versus United States. Among 25- to 34-year-olds, 24 percent had completed higher education in the United States compared to 23 percent in Japan (*Indicator 23*).

Curriculum

Starting in grades 7 or 8, students in American schools can usually make choices about the courses they take. Choices such as whether to take algebra or general math or whether to concentrate on academic or technical courses can have consequences for the student's preparation for higher education. Choice of an undergraduate major can have consequences for a student's preparation for graduate level studies.

Students in the high school class of 1987 took an average of 22.8 credits, 15.6 in academic subjects, 4.4 in vocational subjects, and 2.7 in personal use subjects. The high school class of 1969 took fewer credits (20.5) but a larger share of their credits (73 percent) in academic subjects. Differences between males and females in high school were fairly small. In the class of 1987, females took 70 percent of their credits in academic subjects compared to 67 percent for males; females took 19 percent of their credits in vocational education subjects compared to 20 percent for males. Eighteen years earlier, boys took a higher proportion in academic subjects than girls and a lower proportion in vocational subjects (*Indicator 25*).

In college, the differences in curriculum choices made by men and women magnify. For example, among bachelor's degree recipients in 1990, white women were less than one-fifth as likely as white men to major in computer science or engineering, less than three-fourths as likely to major in the natural sciences, but more than 3 times as likely to major in education. At the graduate level, differences between men and women in the choice of field of study persist. For example, in 1990 white women were one-fifth as likely as white men to receive a doctor's degree in engineering or the computer sciences, similar to the same index at the bachelor's level. On the other side, white women were twice as likely as white men to receive a doctor's degree in education, lower than the index for bachelor's degrees (*Indicator 26*).

Trends in the reading proficiency of 9-, 13-, and 17-year-olds

- **Overall, average reading proficiency for 9- and 13-year-olds was the same in 1990 as in 1971; for 17-year-olds it was somewhat higher in 1990 than in 1971.**
- **Average reading proficiency of black students at all three ages was higher in 1990 than in 1971.**
- **Hispanic 17-year-olds were reading better in 1990 than in 1975.**
- **Between 1971 and 1988, 13- and 17-year-old blacks and 17-year-old Hispanics narrowed large gaps between their reading proficiency scores and those of whites. However, large gaps remain, and among black students, the gap did not continue to narrow in 1990.**

Reading skills are basic to the educational process. When students fall behind in their reading proficiency, they may find it difficult to benefit from other aspects of the curriculum. In the future, poor readers may also find it difficult to participate effectively in an economy requiring increasingly sophisticated job skills.

Average reading proficiency, by age and race/ethnicity: 1971–1990 (scale score)

	Age 9				Age 13				Age 17			
Year	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1971	208	214	[1]170	—	255	261	[1]222	—	[1]285	[1]291	[1]239	—
1975	210	217	[2]181	183	256	262	[1]226	233	[1]286	293	[1]241	[1]252
1980	[1,2]215	[2]221	[2]189	190	259	[2]264	[1,2]233	237	286	293	[1]243	[1]261
1984	211	[2]218	[2]186	187	257	263	[2]236	240	289	[2]295	[2]264	[2]268
1988	212	218	[2]189	194	258	261	[2]243	240	[2]290	[2]295	[2]274	[2]271
1990	209	217	[2]182	189	257	262	[2]242	238	[2]290	[2]297	[2]267	[2]275

Average reading proficiency, by age and sex: 1971–1990 (scale score)

	Age 9		Age 13		Age 17	
Year	Male	Female	Male	Female	Male	Female
1971	201	214	250	261	279	291
1975	204	216	250	262	280	[1]291
1980	[1,2]210	[1,2]220	[2]254	263	282	[1]289
1984	[2]208	214	253	262	[2]284	294
1988	[2]208	216	252	263	[2]286	294
1990	204	215	251	263	284	297

— Not available.

[1] Statistically significant difference from 1990.

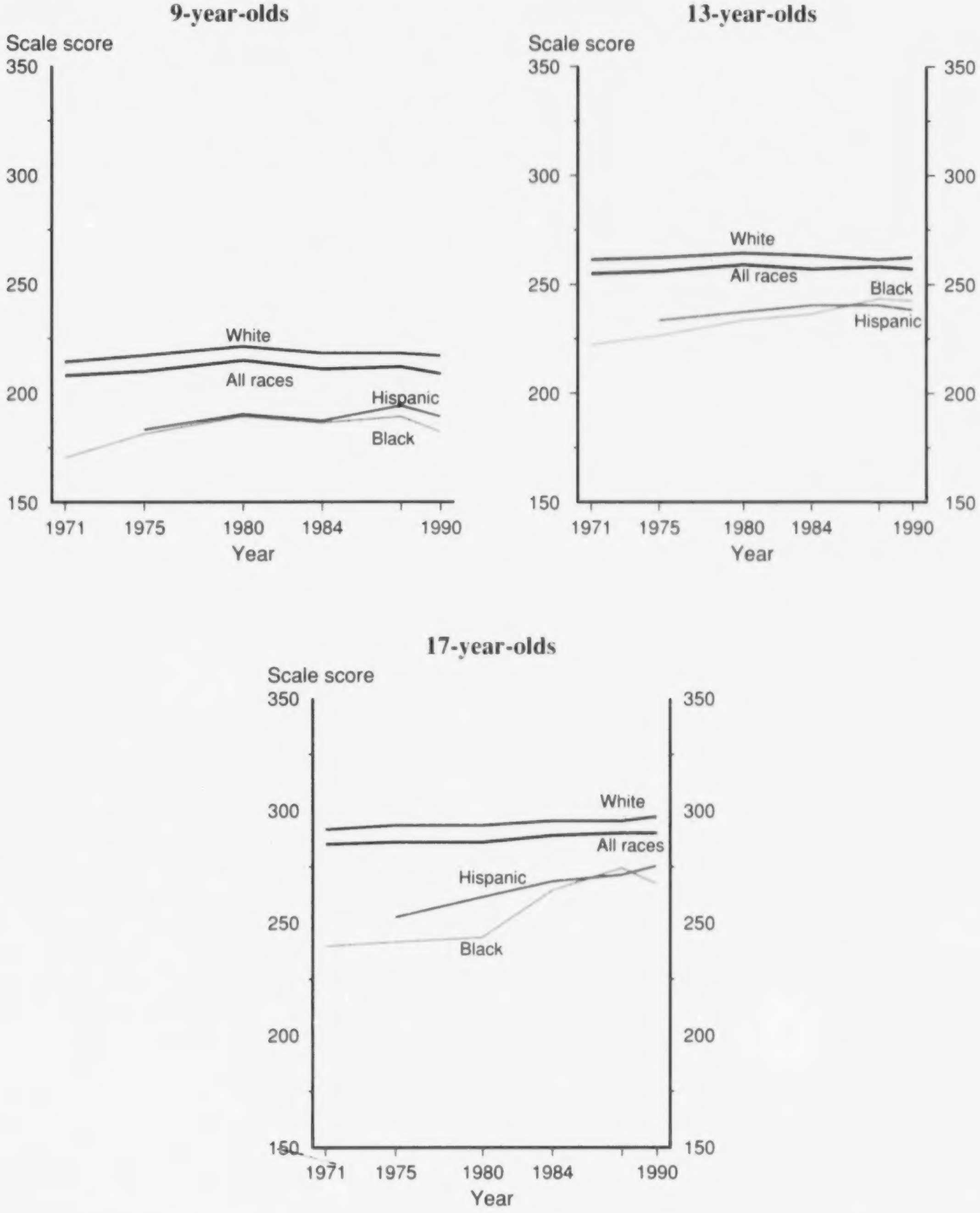
[2] Statistically significant difference from 1971 for all except Hispanics. Statistically significant difference from 1975 for Hispanics.

NOTE: Reading Proficiency Scale

Level 150: Carries out simple discrete reading tasks.
Level 200: Understands specific or sequentially related information.
Level 250: Searches for specific information, interrelate ideas, and make generalizations.
Level 300: Finds, understands, summarizes, and explains relatively complicated information.
Level 350: Synthesizes and learns from specialized reading materials.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Average reading proficiency, by age and race/ethnicity: 1971–1990



SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Trends in writing proficiency in grades 4, 8, and 11

- **Among 4th and 11th graders, levels of writing proficiency in 1990 were approximately the same as in 1984. However, at grade 8, overall average writing proficiency was somewhat lower in 1990 than in either 1988 or 1984.**
- **In 1990, whites continued to score higher than blacks or Hispanics at all three grade levels.**
- **Females consistently scored higher than males at each grade level. In 1990, male *eighth* graders produced writing proficiency scores similar to female *fourth* graders.**

Effective writing skills are fundamental for educational success as well as for later success in the workforce. In a variety of courses, students often must convey complex ideas and information in a clear, succinct manner. Inadequate writing skills, therefore, could inhibit achievement across the curriculum.

- **Since 1984, students in advantaged urban communities in all three age groups have performed at higher levels than their counterparts in disadvantaged urban communities in writing proficiency (supplemental table 13-1).**

Average writing proficiency scores, by age and race/ethnicity: 1984–1990 (scale score)

	Grade 4				Grade 8				Grade 11			
Year	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1984	179	186	154	163	*206	*210	190	191	212	218	195	188
1988	186	193	154	169	*203	*207	190	188	214	219	200	199
1990	183	191	155	168	198	202	182	189	212	217	194	198

Trends in average writing proficiency, by sex: 1984–1990

	Grade 4		Grade 8		Grade 11	
Year	Male	Female	Male	Female	Male	Female
1984	176	*184	*199	*214	201	223
1988	176	195	193	213	204	223
1990	174	193	187	208	200	224

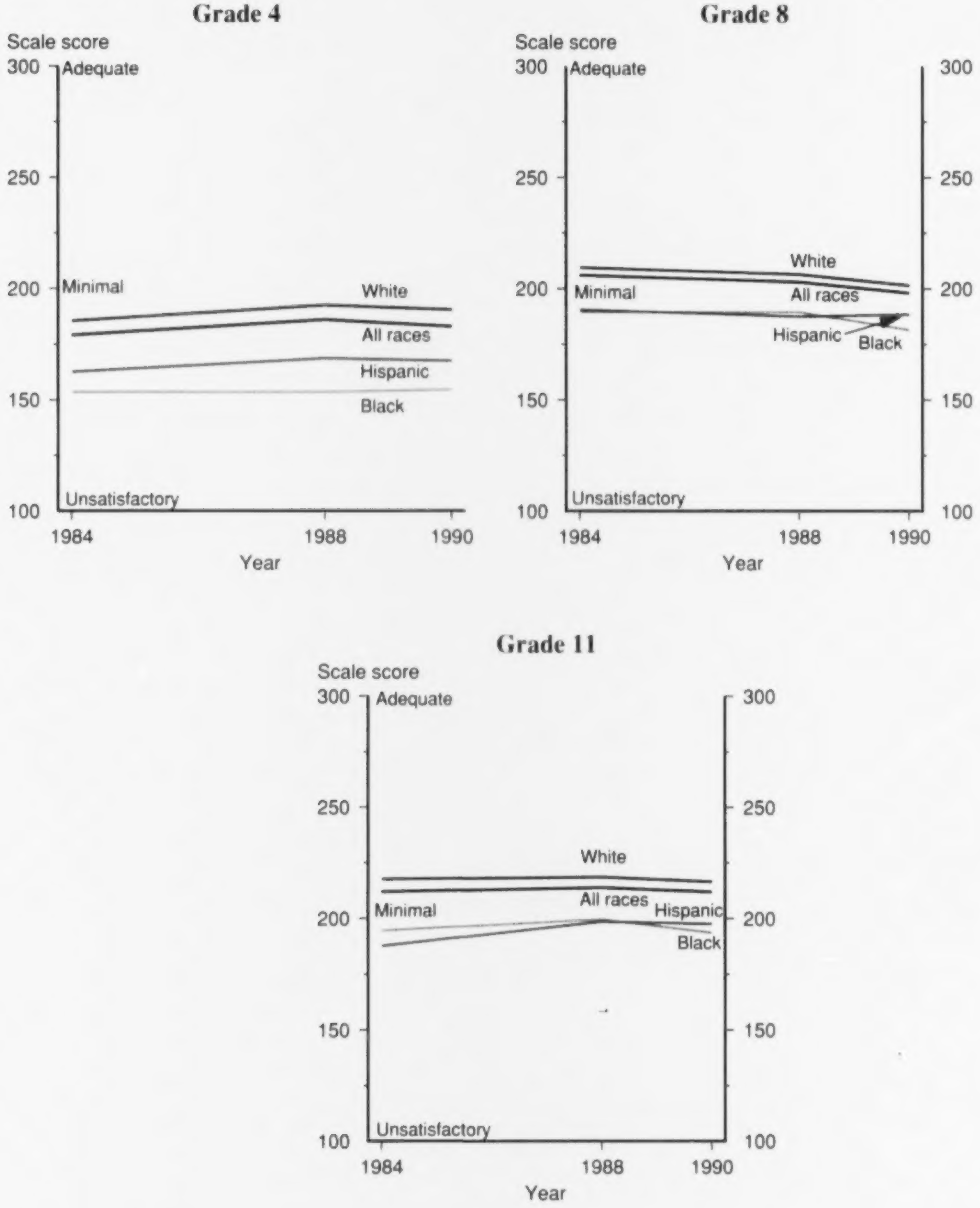
* Statistically significant difference from 1990.

NOTE: Average NAEP writing assessment scores were produced using the Average Response Method (ARM). The ARM provides an estimate of average writing achievement for each respondent as if he or she took 11 of the 12 writing tasks given, and as if NAEP had computed average achievement across that set of tasks.

NOTE: Writing Proficiency Chart
Level 100: **Unsatisfactory**—Failed to reflect a basic understanding of the task.
Level 200: **Minimal**—Recognized the elements needed to complete the task, but were not managed well enough to insure the intended purpose.
Level 300: **Adequate**—Included features critical to accomplishing the purpose of the task and were likely to have the intended effect.
Level 400: **Elaborated**—Reflected a higher level of coherence and elaboration; beyond adequate.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Average writing proficiency in grades 4, 8, and 11, by race/ethnicity: 1984–1990



SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Trends in the mathematics proficiency of 9-, 13-, and 17-year-olds

- **Overall, at ages 9 and 13, average mathematics proficiency improved somewhat between 1973 and 1990, but scores for 17-year-olds showed no improvement over the same period.**
- **Since 1973, white, black, and Hispanic 9-year-olds have shown improvement in average mathematics proficiency (10, 18, and 12 scale points, respectively). Much of this improvement occurred between 1982 and 1990.**

> *Proficiency in mathematics is an important outcome of education. In an increasingly technological world, the mathematics skills of the nation's workers may be a crucial component of economic competitiveness. In addition, knowledge of mathematics is crucial for success in science, computing, and a number of other related fields of study.*

- **Although in 1990 a large gap existed between the mathematics proficiency of whites and their black and Hispanic peers progress in narrowing these gaps occurred between 1973 and 1982, especially for 13- and 17-year-olds. However, except for black 17-year-olds, no narrowing has occurred since 1982.**
- **In 1990, large variability in average mathematics proficiency scores across states was found. A difference of 35 scale points existed between eighth-grade students' performance in the highest and lowest scoring states (supplemental table 14-5).**

Average mathematics proficiency, by age and race/ethnicity: 1973–1990 (scale score)

	Age 9				Age 13				Age 17			
Year	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1973	[1]219	[1]225	[1]190	[1]202	[1]266	274	[1]228	[1]239	304	310	[1]270	277
1978	[1]219	[1]224	[1]192	[1]203	[1]264	[1]272	[1]230	[1]238	[1]300	[2]306	[1]268	276
1982	[1]219	[1]224	[1]195	[1]204	269	274	[1,2]240	[2]252	[1,2]299	[1,2]304	[1]272	277
1986	[1]222	[1]227	[2]202	205	269	274	[2]249	[2]254	302	308	[1,2]279	283
1990	[2]230	[2]235	[2]208	[2]214	[2]270	276	[2]249	[2]255	305	310	[2]289	284

Average mathematics proficiency, by age and sex: 1973–1990 (scale score)

	Age 9		Age 13		Age 17	
Year	Male	Female	Male	Female	Male	Female
1973	[1]218	[1]220	[1]265	267	309	301
1978	[1]217	[1]220	[1]264	[1]265	[2]304	[1]297
1982	[1]217	[1]221	269	268	[2]302	[1,2]296
1986	[1,2]222	[1]222	[2]270	268	305	299
1990	[2]229	[2]230	[2]271	270	306	303

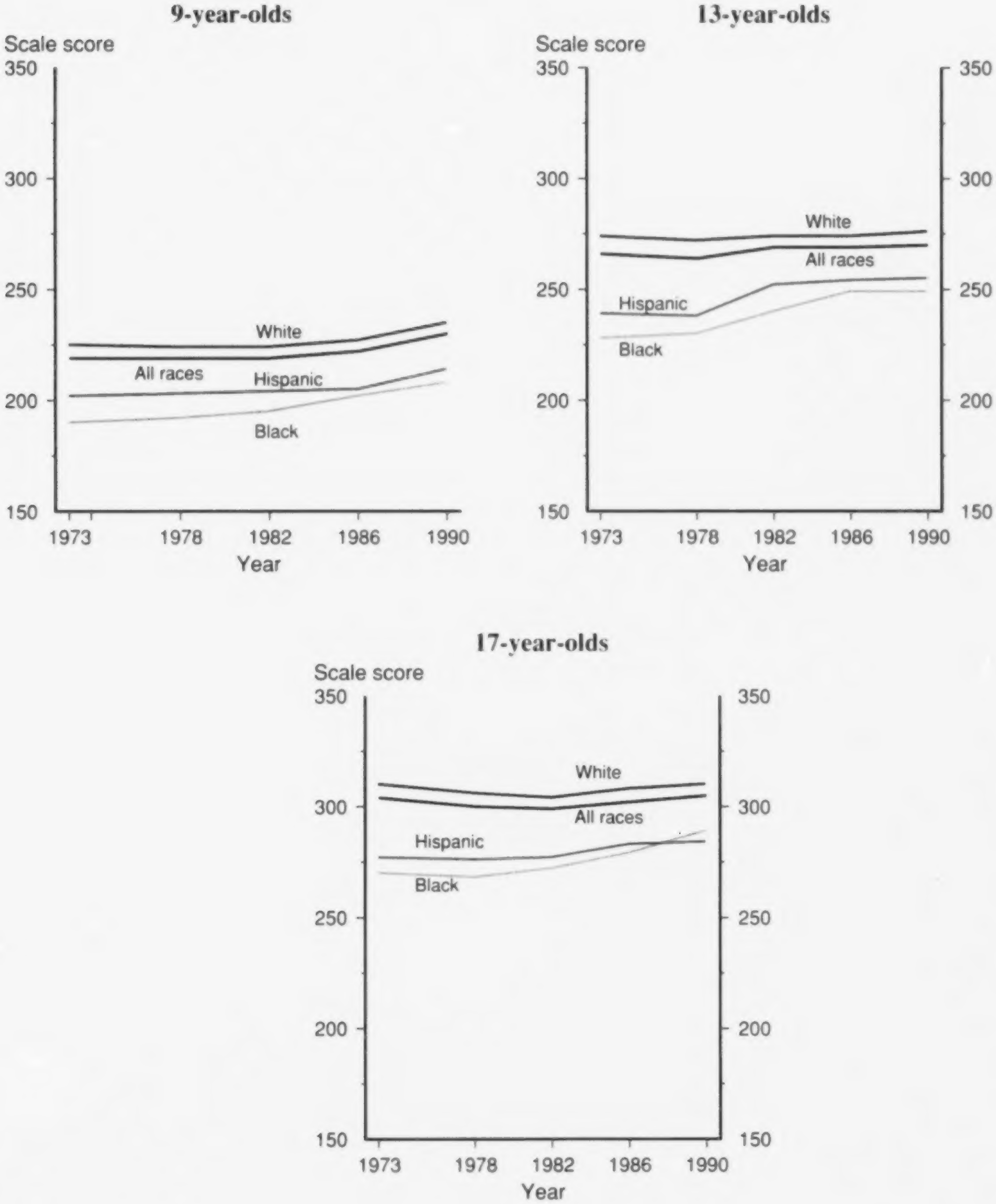
[1] Statistically significant difference from 1990.

[2] Statistically significant difference from 1973.

Note: Mathematics Proficiency Scale
Level 150: Performs simple addition and subtraction.
Level 200: Uses basic operations to solve simple problems.
Level 250: Uses intermediate level mathematics skills to solve two-step problems.
Level 300: Understands measurement and geometry and solves more complex problems.
Level 350: Understands and applies more advanced mathematical concepts.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Average mathematics proficiency, by age and race/ethnicity: 1973–1990



SOURCE: National Assessment of Educational Progress. *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990,* 1991.

Trends in the science proficiency of 9-, 13-, and 17-year-olds

- **In 1990, overall science achievement was at the same level at ages 9 and 13 as it was in 1970, but science achievement for 17-year-olds in 1990 was lower than in 1970.**
- **Between 1977 and 1990, the average science proficiency of 9- and 13-year-olds increased in all three racial/ethnic groups, following declines in the early 1970s shown among blacks and whites. The average science proficiency of 17-year-olds in all racial/ethnic groups increased between 1982 and 1990.**

> ***Competence in science is an important outcome of education. The ability to apply scientific information, interpret data, and make inferences about scientific findings is required in a world which relies heavily on technological and scientific advances.***

- **In 1990, 9-year-old males and females produced similar average science proficiency scores, but 17-year-old males produced significantly higher average proficiency scores than did 17-year-old females.**
- **Although the gap between the performance of white and black 9- and 13-year-olds decreased between 1970 and 1982, the average performance of black students was still below that of white students in 1990.**

Average science proficiency, by age and race/ethnicity: 1970–1990 (scale score)

	Age 9				Age 13				Age 17			
	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1970	225	236	[1]179	—	255	263	215	—	[1]305	[1]312	258	—
1973	[1,2]220	[1,2]231	[1]177	—	[1,2]250	[1,2]259	[1]205	—	[1,2]296	[2]304	[2]250	—
1977	[1,2]220	[1,2]230	[1]175	[1]192	[1,2]247	[1,2]256	[1]208	[1]213	[2]290	[2]298	[1,2]240	262
1982	[1]221	[1,2]229	187	[1]189	[1]250	[1,2]257	217	226	[1,2]283	[1,2]293	[1,2]235	[1,2]249
1986	[1]224	[1]232	[2]196	199	251	[1]259	222	226	[2]289	[2]298	253	259
1990	229	238	[2]196	[2]206	255	264	226	232	[2]290	[2]301	253	262

Average science proficiency, by age and sex: 1970–1990

	Age 9		Age 13		Age 17	
	Male	Female	Male	Female	Male	Female
1970	228	223	257	253	[1]314	[1]297
1973	[1]223	[1]218	[1]252	[2]247	[1,2]304	[2]288
1977	[1,2]222	[1,2]218	[1,2]251	[1,2]244	[2]297	[2]282
1982	[1]221	[1]221	256	[1,2]245	[2]292	[1,2]275
1986	227	[1]221	256	[2]247	[2]295	[2]282
1990	230	227	259	252	[2]296	[2]285

— Not available.

[1] Statistically significant difference from 1990.

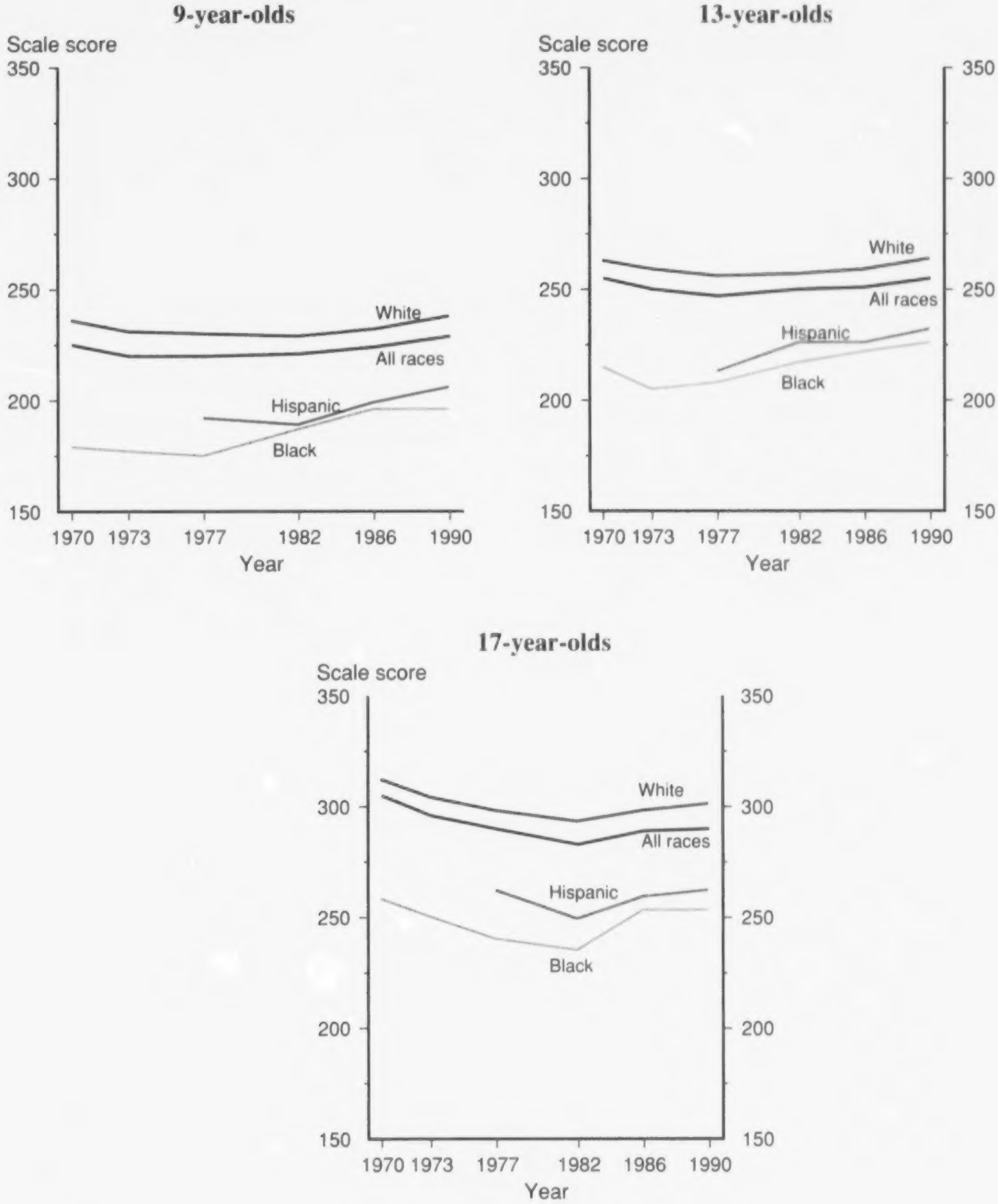
[2] Statistically significant difference from 1970 for all except Hispanics. Statistically significant difference from 1977 for Hispanics.

Science Proficiency Scale

Level 150: Knows everyday science facts.
Level 200: Understands and applies simple scientific principles.
Level 250: Uses scientific procedures and analyzes scientific data.
Level 300: Understands and applies scientific and principles.
Level 350: Integrates scientific information and experimental evidence.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Average science proficiency, by age and by race/ethnicity: 1970–1990



National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990,* 1991.

International comparisons of mathematics performance

- **In the second International Assessment of Educational Progress (IAEP), 9-year-old students from the United States scored lower on average in mathematics performance than 9-year-olds from Taiwan, Korea, and the former Soviet Union.**
- **Thirteen-year-olds from the United States scored lower on average than students of the same age in other large countries except Spain.**
- **In almost all countries, at least 10 percent of the students at age 9 and 13 scored substantially above the overall average for all participating countries (20 points or more above the average for their age group) (see supplemental tables 16-1 and 16-3).**

> *The mathematics skills of a nation's workers are a critical component of its economic competitiveness. Twenty years from now, the youth of today will be competing in the global marketplace. They will depend on the mathematics learned in this decade to succeed in the complex business and technological environment of 2012.*

- **The topical area in which the U.S. average was higher than the topical average for all countries was data analysis, statistics, and probability, a section which focused on mathematical applications (see supplemental tables 16-2 and 16-4).**

Percentage correct on mathematics assessment, by country: 1991

Age 9

	Average percent correct			Percentile Scores					
Larger countries	Total	Male	Female	1st	5th	10th	90th	95th	99th
Korea	74.8	77.2	72.4	26.2	41.0	50.8	93.4	95.1	98.4
Taiwan	68.1	68.4	67.8	19.2	32.1	41.0	91.8	95.1	98.4
Soviet Union[1]	65.9	66.4	65.4	20.0	30.8	37.7	90.2	93.4	98.4
Spain[2]	61.9	61.9	61.8	18.8	26.8	32.8	86.9	90.2	96.7
Canada[3]	59.9	59.9	60.0	19.6	28.3	35.7	83.6	88.5	93.4
United States	58.4	58.7	58.0	18.0	24.6	29.5	83.6	90.2	96.7

Age 13

	Average percent correct			Percentile Scores					
Larger countries	Total	Male	Female	1st	5th	10th	90th	95th	99th
Korea	73.4	74.4	72.2	20.0	33.3	41.3	96.0	97.3	100.0
Taiwan	72.7	73.1	72.4	18.7	26.7	35.0	97.3	98.7	100.0
Soviet Union[1]	70.2	70.0	70.3	20.9	35.2	42.7	92.0	94.7	98.7
France	64.2	65.5	62.8	22.7	30.7	37.3	89.3	92.0	97.3
Canada[4]	62.0	63.0	60.9	21.3	32.0	37.3	86.7	91.8	97.3
Spain[2]	55.4	57.1	53.8	20.3	28.6	32.9	78.4	84.7	91.9
United States	55.3	55.8	54.8	17.3	24.0	29.3	82.7	90.7	97.3

[1] Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

[2] Regions except Cataluña; Spanish-speaking schools.

[3] Four out of 10 provinces; see supplemental table 16-1 for the scores of 9-year-olds in individual Canadian provinces.

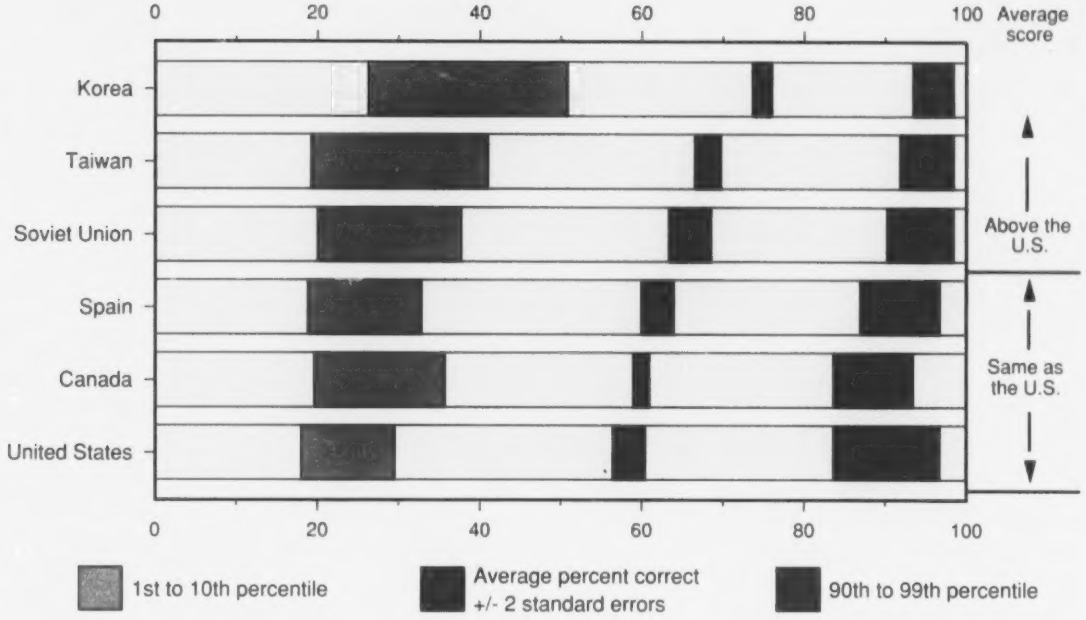
[4] Nine out of 10 provinces; see supplemental table 16-3 for the scores of 13-year-olds in individual Canadian provinces.

NOTE: In the International Assessment of Educational Progress, 20 countries assessed the mathematics achievement of 13-year-olds and 14 assessed 9-year-olds. The countries above are the larger countries which assessed virtually all age-eligible children, except as noted above. See supplemental tables 16-1–4 for performance information on other countries.

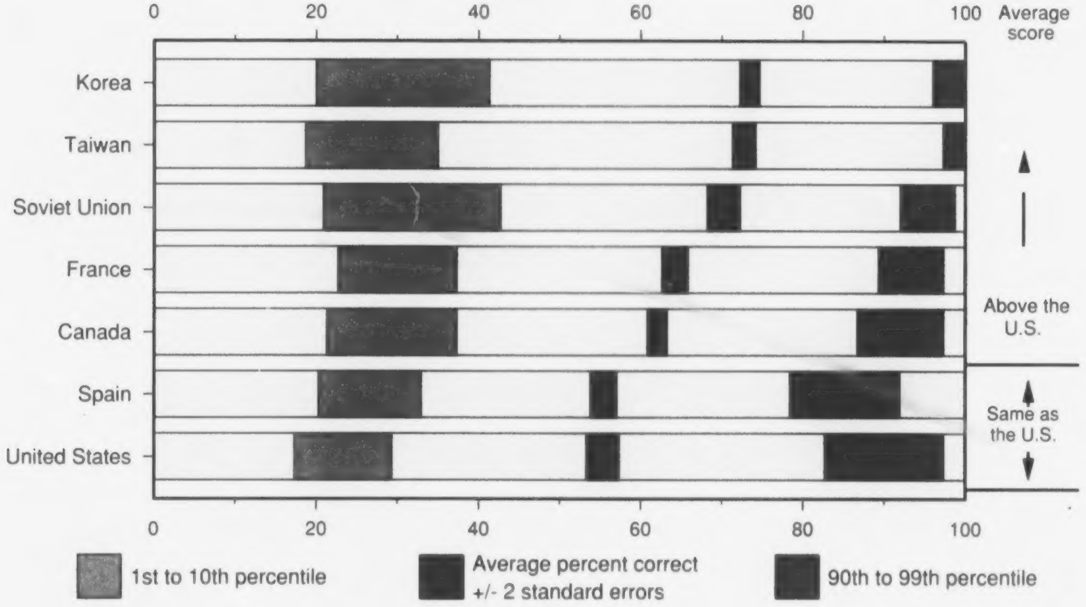
SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Distribution of percentage correct scores on mathematics assessment, by country: 1991

Age 9



Age 13



SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

International comparisons of science performance

- **In the second International Assessment of Educational Progress (IAEP), 9-year-old students from Korea scored higher on average in science performance than 9-year-olds from the United States.**
- **Thirteen-year-olds from Korea, Taiwan, and the former Soviet Union scored higher on average than students of the same age in the U.S.**
- **13-year-olds from the United States performed better in scientific literacy (nature of science), earth and space science, and life science, than in physical science.**

> ***The scientific and technological skills of a nation's workers are a critical component of its economic competitiveness. Twenty years from now, the youth of today will be competing in the global marketplace. They will depend on the science learned in this decade to succeed in the complex business and technological environment of 2012.***

- **The 90th percentile score of 9-year-olds in the United States was second only to Taiwan in science performance, though U.S. performance at age 13 was below four other large countries at the 90th percentile.**
- **Among 13-year-olds in nearly all countries, boys performed better than girls. This differential was not so consistent among the younger students.**

Percentage correct on science assessment, by country: 1991

Age 9

	Average percent correct			Percentile scores					
Larger countries	Total	Male	Female	1st	5th	10th	90th	95th	99th
Korea	67.9	70.4	65.1	32.8	44.8	50	84.5	87.9	93.1
Taiwan	66.7	68.5	64.6	27.6	39.7	44.8	86.2	89.7	94.8
United States	64.7	65.5	63.8	25.9	36.2	43.1	84.5	87.9	93.1
Canada[1]	62.8	63.6	62.0	27.6	37.9	43.1	81.0	84.5	91.4
Spain[2]	61.7	63.4	59.7	27.6	36.2	41.8	81.0	84.5	89.7
Soviet Union[3]	61.5	62.7	60.4	29.3	39.7	43.1	79.3	86.2	93.1

Age 13

	Average percent correct			Percentile scores					
Larger countries	Total	Male	Female	1st	5th	10th	90th	95th	99th
Korea	77.5	79.6	75.0	35.9	50.0	57.8	93.8	95.3	98.4
Taiwan	75.6	76.3	74.9	28.6	42.2	51.6	93.8	95.3	98.4
Soviet Union[3]	71.3	72.9	69.6	31.3	43.8	50.8	89.1	92.2	96.9
Canada[4]	68.8	70.5	67.1	32.8	43.8	48.4	87.5	90.6	95.3
France	68.6	70.7	66.5	31.3	40.6	45.3	89.1	92.2	96.9
Spain[2]	67.5	69.2	66.0	35.1	42.6	48.4	85.9	89.1	95.3
United States	67.0	69.4	64.5	28.1	39.3	43.8	85.9	90.6	95.3

[1] Four out of 10 provinces; see supplemental table 17-1 for the scores of 9-year-olds in individual Canadian provinces.

[2] Regions except Cataluña; Spanish-speaking schools.

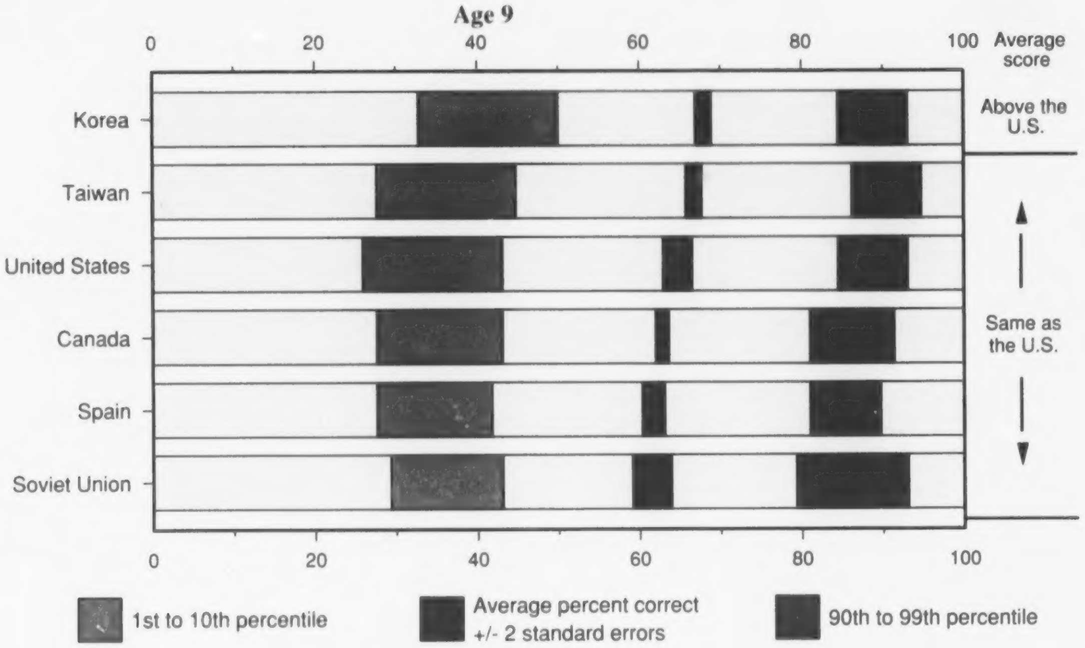
[3] Fourteen out of 15 republics in the former Soviet Union; Russian-speaking schools.

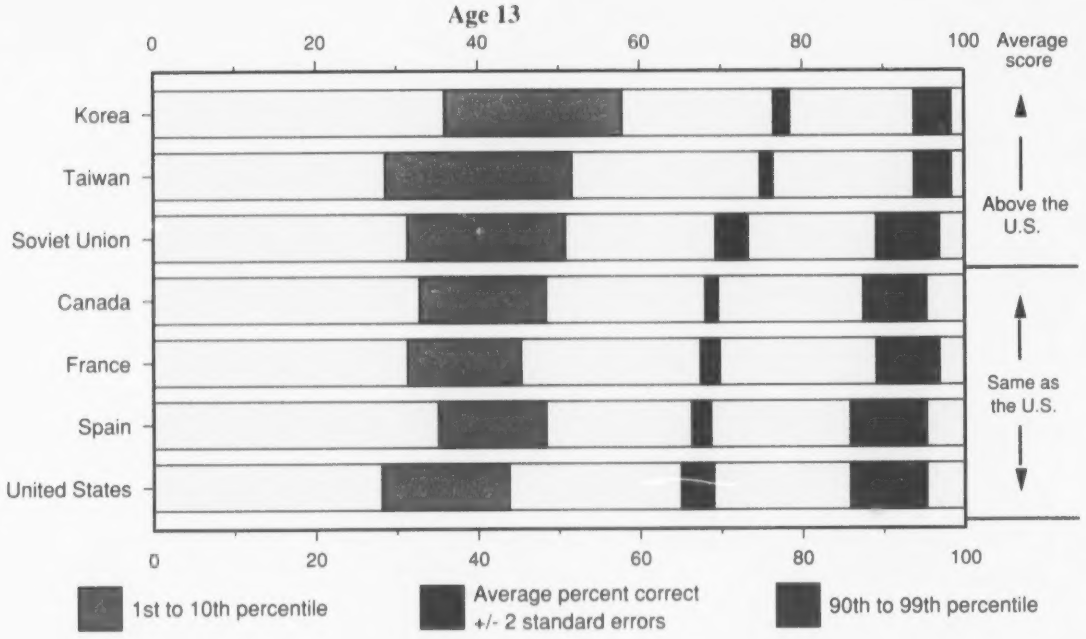
[4] Nine out of 10 provinces; see supplemental table 17-3 for the scores of 13-year-olds in individual Canadian provinces.

NOTE: In the International Assessment of Educational Progress, 20 countries assessed the mathematics achievement of 13-year-olds and 14 assessed 9-year-olds. The countries above are the larger countries which assessed virtually all age-eligible children, except as noted above. See supplemental tables 17-1–4 for performance information on other countries.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Distribution of percentage correct scores on science assessment, by country: 1991





SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

College entrance examination scores

- **After years of decline, SAT average total scores increased 16 points between 1980 and 1985. Since 1987, average total scores have fallen 10 points.**

The Scholastic Aptitude Test (SAT) is the test taken most frequently by college-bound students. It is designed to predict success in the freshman year in college. This test summarizes the performance outcomes of college-bound youth. However, the reader should be aware that the proportion of high school graduates taking the exam changes over time which complicates comparisons.

- **After increasing 7 points from 1980 to 1985, average SAT verbal scores decreased 9 points between 1986 and 1991. Math scores increased 10 points between 1980 and 1987, and then decreased 2 points between 1990 and 1991.**
- **Between 1976 and 1991, on average, black students' SAT verbal scores increased by 19 points, and mathematics scores increased by 31 points (supplemental tables 18-8 and 18-9). In the same period, verbal scores among whites declined by 10 points and mathematics scores declined by 4 points.**
- **Between 1980 and 1987, average SAT total scores increased slightly or remained stable even though the number of test-takers as a percent of high school graduates increased.**

SAT test-takers, scores, and percentage scoring at or above 600: Selected school years ending 1972–1991

	SAT test-takers			SAT scores				
					Verbal		Mathematics	
School year ending	Number	As a percent of high school graduates[1]	Percent minority	Total mean	Mean	Percent scoring 600 or higher	Mean	Percent scoring 600 or higher
1972	1,022,820	34.1	—	937	453	11	484	17
1974	985,247	32.1	—	924	444	10	480	17
1976	999,829	31.8	15.0	903	431	8	472	17
1978	989,307	31.6	17.0	897	429	8	468	15
1980	991,514	32.6	17.9	890	424	7	466	15
1982	988,680	33.0	18.3	893	426	7	467	15
1984	964,684	34.9	19.7	897	426	7	471	17
1985	977,361	36.5	20.0	906	431	7	475	17
1986	1,000,748	37.9	—	906	431	8	475	17
1987	1,080,426	40.1	21.8	906	430	8	476	18
1988[2]	1,134,364	40.9	23.0	904	428	7	476	17
1989[2]	1,088,223	39.9	25.3	903	427	8	476	18
1990[2]	1,025,523	39.6	26.6	900	424	7	476	18
1991[3]	1,032,685	41.2	28.0	896	422	7	474	17

— Not available. Race/ethnic data not available before 1976.

[1] The ratio of the number of individuals taking the SAT in the year to the number of high school graduates in the same year expressed as a percentage. Includes graduates of public and private schools.

[2] Data for the percentage taking the SAT have been revised from previously published figures for years 1988–1990.

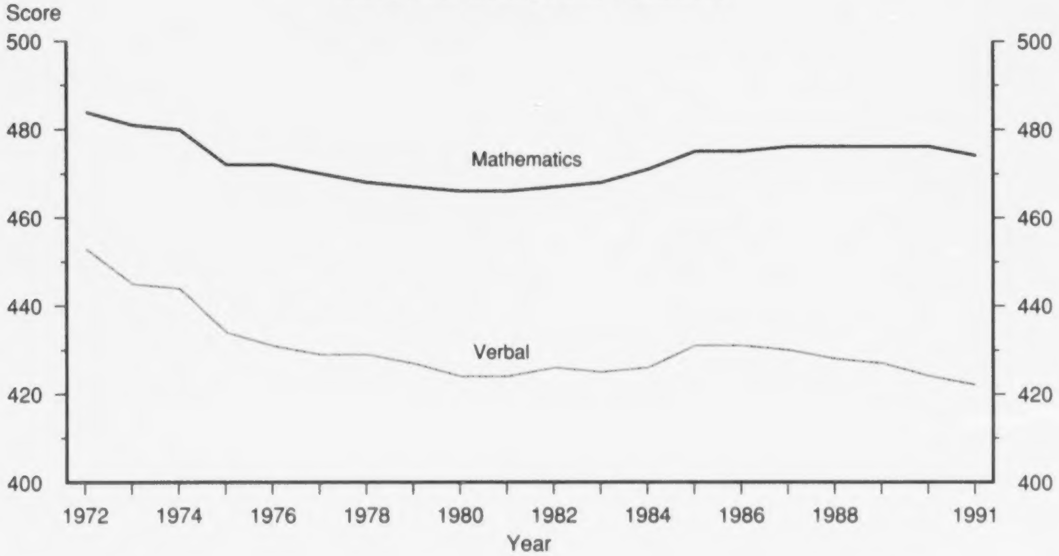
[3] Percentage of public high school graduates taking the SAT is based on state estimates of public high school graduates.

NOTE: See supplemental note to *Indicator 18* on the interpretation of SAT scores.

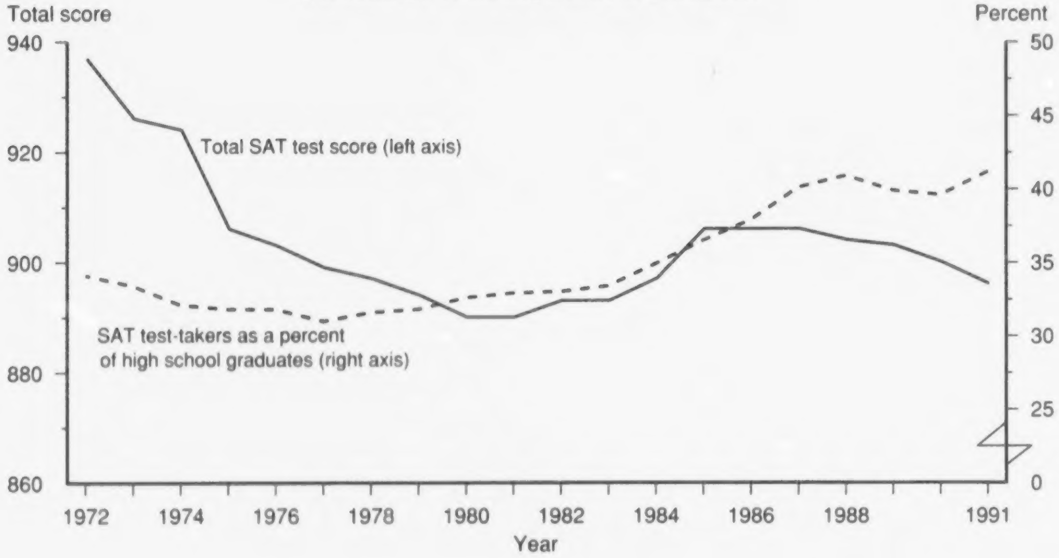
SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1991, table 95.

Trends in SAT scores: 1972–1991

Average SAT mathematics and verbal scores for college-bound high school seniors



SAT total score, and SAT test-takers as a percentage of all high school graduates



SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1991, table 95.

Graduate Record Examination (GRE) scores

- **The average total score on the GRE fell 70 points between 1965 and 1979. Since then it has increased 54 points.**
- **The average quantitative score on the GRE has also risen 54 points since 1975, and is now at its highest point over the last 3 decades. The verbal score has risen 16 points since 1982, but is still well below the levels of the mid-1960s.**
- **The percentage of test-takers who are not U.S. citizens has been increasing. Non-U.S. citizens do better on the quantitative component. They do more poorly on the verbal component (and total score) of the GRE than U.S. citizens (supplemental table 19-2).**

The Graduate Record Examination (GRE) is a measure of the general learned abilities of prospective graduate students. It is used to predict performance in graduate school. No good measure of the amount of learning acquired during college exists. The GRE, although taken by less than a third of college graduates, is the best broad-based measure of general learned abilities that exists for prospective graduate students. However, the reader should be aware of the limitations of average GRE scores which include: (1) the proportion of college graduates taking the exam changes over time; (2) an increasing proportion of foreign students are taking the exam; and (3) the average scores include some students who take the exam more than once.

Graduate Record Examination (GRE) scores and number of test-takers: Selected academic years ending 1965–1991

Academic year ending	GRE test-takers			GRE scores		
	Number	As percent of BAs[1]	Percent U.S. citizens	Total	Verbal	Quantitative
1965	93,792	18.7	—	1,063	530	533
1967	151,134	27.0	—	1,047	519	528
1969	206,113	28.3	—	1,039	515	524
1971	293,600	35.0	—	1,009	497	512
1973	290,104	31.5	—	1,009	497	512
1975	298,335	32.3	—	1,001	493	508
1976	299,292	32.3	92.5	1,002	492	510
1977	287,715	31.3	91.3	1,004	490	514
1978	286,383	31.1	[2] 89.1	1,002	484	518
1979	282,482	30.7	90.0	993	476	517
1980	272,281	29.3	89.3	996	474	522
1981	262,855	28.1	86.8	996	473	523
1982	256,381	26.9	86.7	1,002	469	533
1983	263,674	27.2	86.1	1,014	473	541
1984	265,221	27.2	85.9	1,016	475	541
1985	271,972	27.8	84.9	1,019	474	545
1986	279,428	28.3	84.5	1,027	475	552
1987	293,560	29.6	84.2	1,027	477	550
1988	303,703	30.5	[2] 79.5	1,040	483	557
1989	326,096	32.0	—	1,044	484	560
1990	344,572	33.0	—	1,048	486	562
1991	379,882	35.7	—	1,047	485	562

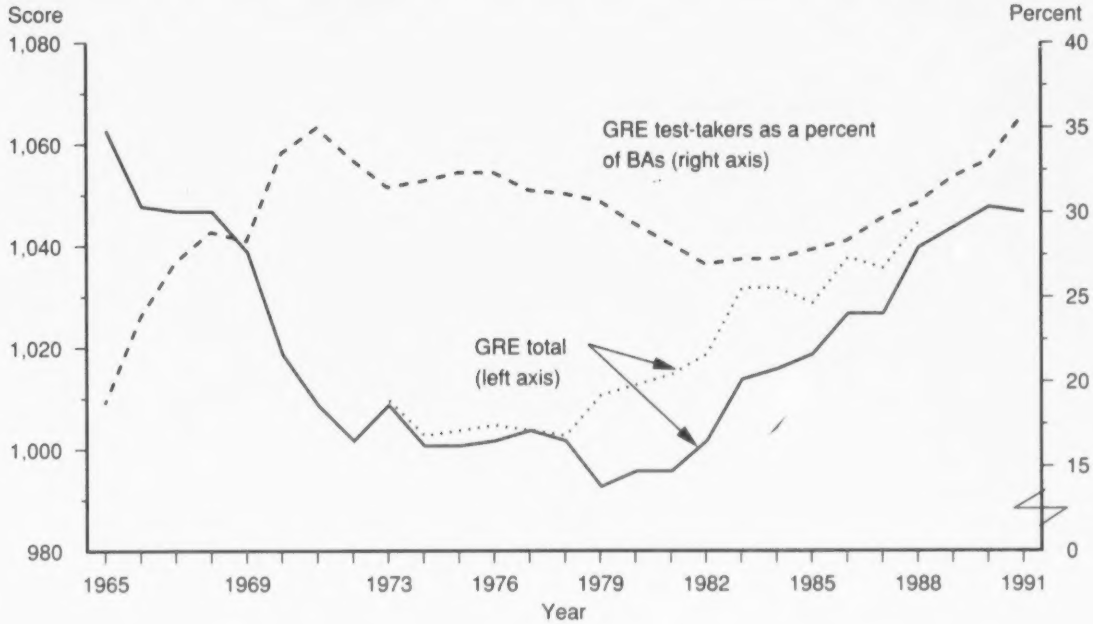
— Not available.

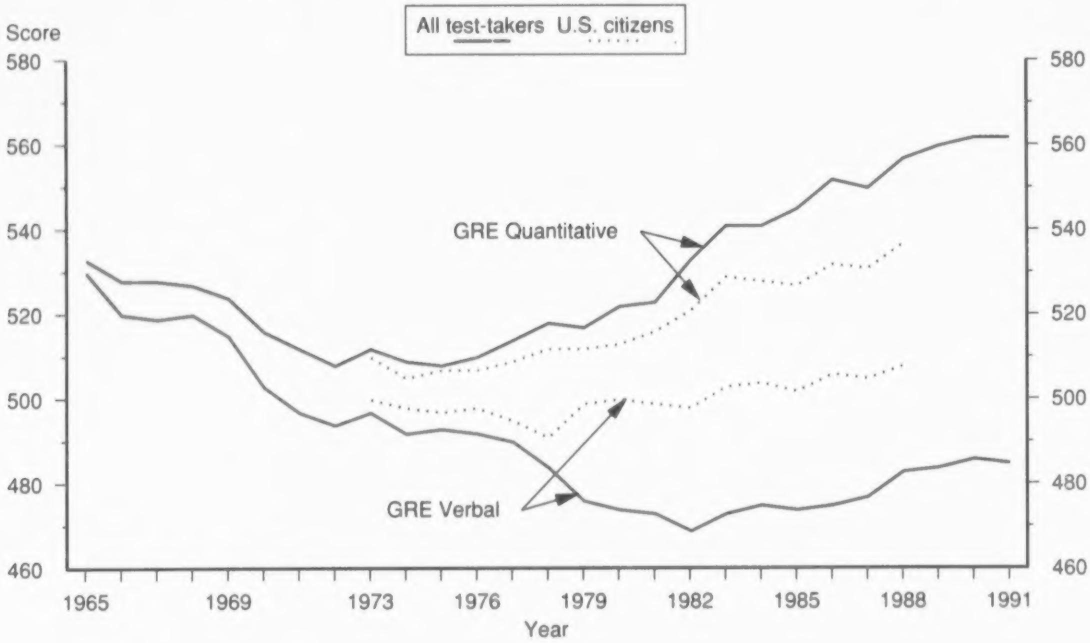
[1] Ratio of the number of GRE test-takers to the number of baccalaureate degrees awarded expressed as a percentage.

[2] Based on revised procedures. Original estimate for 1978 was 91.1.

SOURCE: Educational Testing Service and U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Graduate Record Examination (GRE) scores and number of test-takers as a percentage of baccalaureate degrees: Academic years ending 1965–1991





SOURCE: Educational Testing Service and U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

High school dropout, completion and enrollment rates

- **The percentage of 19- to 20-year-olds who have not completed high school and are not enrolled in school (status dropouts) generally declined since 1973.**
- **In 1990, the overall high school completion rate for 19- to 20-year-olds was 83 percent; this represented no overall change since 1973.**
- **High school completion rates for white 19- to 20-year-olds in 1990 were higher than black rates, which in turn were higher than Hispanic rates.**
- **Between 1973 and 1990, completion rates of black 19- to 20-year-olds increased by 10 percentage points, while those of whites and Hispanics did not change significantly. Black status dropout rates were 10 percentage points lower in 1990 than in 1973.**

One important measure of this nation's success in education is the proportion of its youth completing high school. Possession of a high school diploma or its equivalent signifies that an individual should have sufficient knowledge and skills to function productively in society. Dropping out of school indicates that an individual is likely to lack these prerequisites and is at a relative disadvantage.

High school dropout, completion, and enrollment rates for 19- to 20-year-olds: 1973–1990

	Status dropout rates				High school completion rate				High school enrollment rates			
Year	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	15.3	12.2	25.8	39.6	82.2	85.9	68.2	54.7	2.5	1.9	5.9	5.6
1974	16.4	13.8	24.8	32.6	80.6	84.6	65.6	58.8	2.9	1.5	9.5	8.6
1975	16.2	13.5	26.4	31.7	81.0	84.7	66.0	62.6	2.8	1.8	7.5	5.7
1976	15.9	13.2	24.1	34.8	81.1	85.2	67.6	57.3	3.0	1.7	8.3	7.9
1977	15.7	13.3	22.0	34.6	81.4	84.9	69.1	60.0	2.9	1.7	8.8	5.4
1978	16.0	12.8	24.9	38.1	80.9	85.2	67.1	56.0	3.1	1.9	8.1	5.8
1979	16.7	13.8	26.7	35.2	80.4	83.8	68.5	59.8	2.9	2.3	4.8	5.0
1980	16.4	12.7	23.5	44.1	81.1	85.6	71.0	51.3	2.5	1.8	5.4	4.7
1981	15.8	12.9	21.1	36.1	80.8	84.8	71.8	56.8	3.4	2.3	7.1	7.2
1982	16.3	13.4	23.0	34.9	80.6	84.7	69.4	58.8	3.1	1.9	7.6	6.3
1983	15.2	12.2	21.3	34.1	81.2	85.2	73.2	57.9	3.6	2.6	5.5	8.0
1984	15.0	12.8	18.1	30.6	82.0	85.4	75.3	63.0	3.1	1.9	6.5	6.3
1985	13.6	11.1	18.7	28.8	83.1	87.0	73.8	64.8	3.3	2.0	7.5	6.3
1986	12.9	10.2	17.6	28.3	83.8	87.8	75.0	65.8	3.3	2.0	7.5	5.9
1987[2]	13.9	11.4	15.5	30.2	82.9	86.4	79.3	63.7	3.2	2.2	5.1	6.1
1988[2]	14.9	10.8	20.2	40.9	82.1	87.1	73.5	53.6	3.0	2.1	6.2	5.5
1989[2]	15.1	11.6	18.6	34.2	81.8	86.8	74.8	59.4	3.2	1.6	6.6	6.5
1990[2]	13.6	10.4	15.6	34.0	82.8	87.3	77.6	59.7	3.5	2.3	6.8	6.3

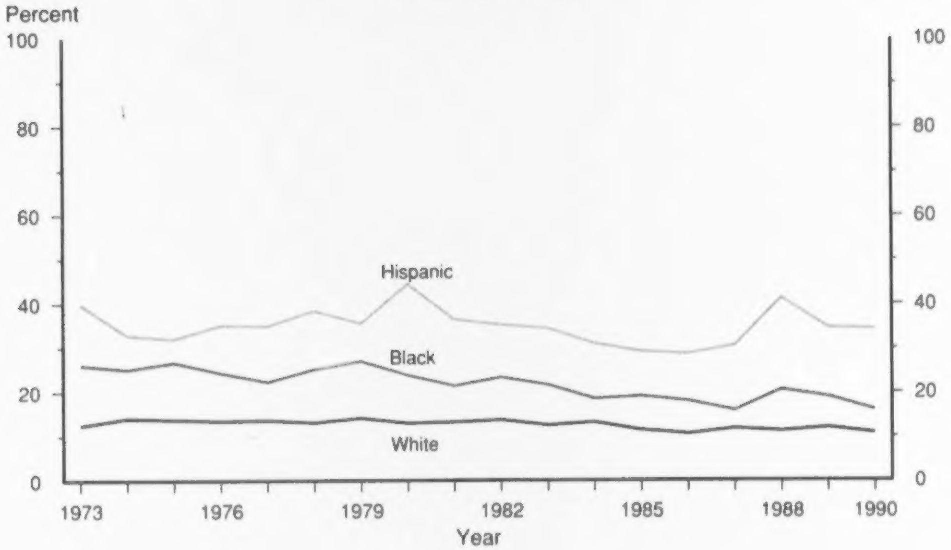
[1] Includes in the total individuals who are not Hispanic, white or black; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alaska native.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

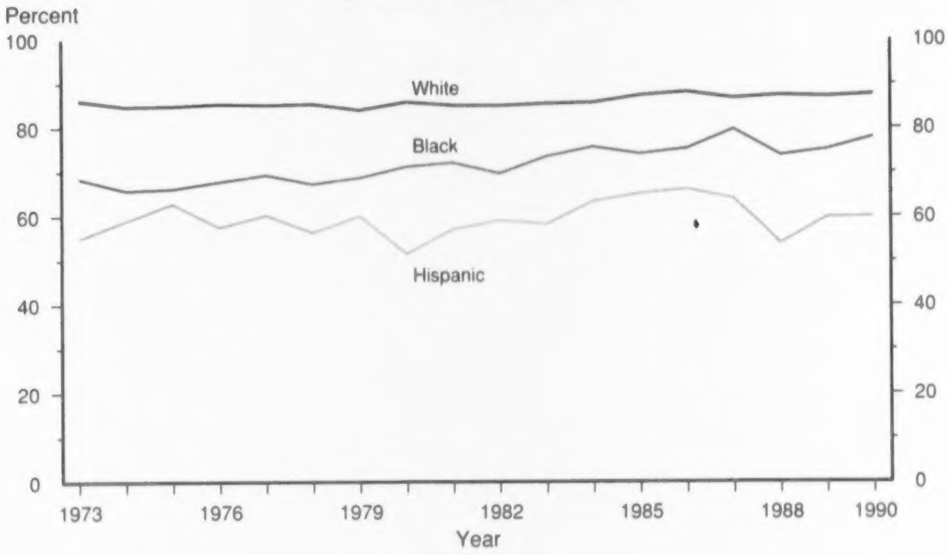
NOTE: Status dropout rates measure the proportion of 19- to 20-year-olds who had not completed high school and were not currently enrolled in school. High school completion rates measure the number of individuals 19 to 20 years olds who have completed 12 or more years of school. High school enrollment rates measure those 19- to 20-year-olds currently enrolled in school below the college level. The 3 rates sum to 100 percent.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

High school dropout and completion rates for 19- to 20-year-olds, by race/ethnicity: 1973–1990



Status dropout rate



High school completion rate

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

International comparisons of secondary school enrollment and graduation

- **The enrollment and graduation ratios for the last year of secondary school for the United States were higher than those for about half of OECD countries.**
- **Graduation ratios were higher for females than for males in most countries.**
- **Among students enrolled in the final year of secondary school, a higher share of U.S. students than those in five of nine other countries (for which both ratios could be calculated) actually graduated.**

> *Within countries, comparisons of the enrollment rate in the last year of secondary school with the graduation rate are an indication of the percentage of students who fail to complete all requirements for graduation in their last year of secondary school. In some countries this occurs by failing to pass the examination required to receive the diploma.*

Theoretical ending age and usual length of secondary education, and students' enrollment and graduation ratios from public and private secondary school, by type of secondary system and country: 1987–1988

Type of school system/ Country	Theoretical ending age of secondary education	Usual length of secondary education (in years)	Enrollment ratio[1]			Graduation ratio[1]		
			Total	Male	Female	Total	Male	Female
Comprehensive[3]								
United States	17	3	80.6	76.5	84.9	73.0	68.9	77.3
Japan	17	3	—	—	—	89.5	86.3	92.8
Mixed[4]								
Australia	17	2	72.2	77.4	66.8	—	—	—
Canada	17	3	—	—	—	67.9	66.4	69.6
Denmark	18	3	113.9	117.9	109.9	104.7	97.6	112.1
Finland	18	3	—	—	—	116.3	97.5	135.9
France	17	3	—	—	—	84.5	80.9	88.4
Italy	18	5	44.1	42.4	46.0	43.2	40.6	45.9
Norway	18	3	78.5	86.1	70.4	58.1	54.6	61.9
Sweden	18	3	84.9	85.9	83.7	80.9	80.3	81.6
Spain	17	4	87.3	85.3	89.4	56.0	52.6	59.6
Turkey	17	3	26.1	31.4	20.5	22.1	26.2	17.9
United Kingdom	17	4	—	—	—	65.1	63.5	66.7
Differentiated[5]								
Austria	18	5	60.3	60.9	59.7	54.7	52.2	57.3
Ireland	17	2	95.7	81.0	111.1	82.0	77.6	86.6
Germany	18	3	134.4	136.8	132.0	112.1	114.5	109.6
Luxembourg[6]	18	4	—	—	—	52.3	48.2	56.5
Netherlands	18	3	—	—	—	56.9	55.3	58.6
Portugal	17	3	48.6	42.1	55.3	—	—	—
Switzerland	19	4	—	—	—	87.9	92.3	83.2

— Not available.

[1] The enrollment ratio is the ratio of the number of students who are enrolled for the final year of an upper secondary education program to the population at the theoretical ending age of secondary education. The graduation ratio is the ratio of the number who successfully fulfill formal graduation requirements (receiving a credential, certificate, or degree through course completion and/or passing specified examination(s)) to the population at the theoretical ending age of secondary education. In countries where the level is over 100, it is likely that many of those graduates are older than this reference age.

[3] Comprehensive schools (academic and vocational programs in the same school) throughout secondary education.

[4] Comprehensive lower secondary and differentiated (different schools for academic and vocational programs) upper secondary schools.

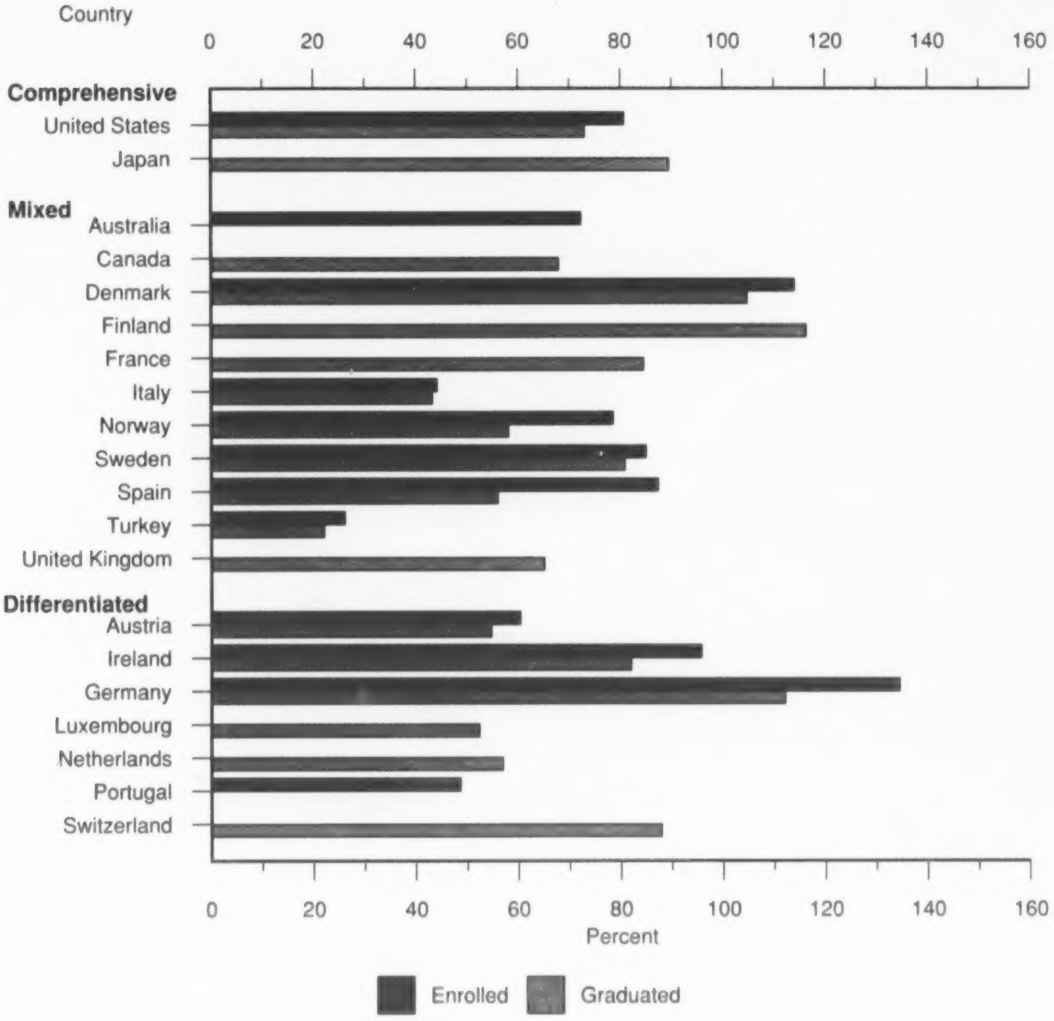
[5] Differentiated lower and upper secondary.

[6] Some students are enrolled in one of the surrounding countries.

NOTE: "OECD" countries are members of the Organization for Economic Cooperation and Development—primarily countries in Europe and North America, and Australia, Japan, and New Zealand.

SOURCE: Organization for Economic Cooperation and Development, Center for Education Research and Innovation, *Education at a Glance*, 1992.

Last year secondary enrollment and graduation, as a ratio of the population at theoretical ending age of secondary education, by country: 1988



SOURCE: Organization for Economic Cooperation and Development, unpublished tabulations, 1991.

Educational attainment at ages 25 to 29

- **In 1991, 90 percent of white 25- to 29-year-olds were high school graduates, in contrast to 81 percent of blacks and 56 percent of Hispanics.**
- **In 1991, 55 percent of white 25- to 29-year-old high school graduates had completed 1 or more years of college, in contast to 43 percent of blacks and 41 percent of Hispanics.**
- **In 1991, 30 percent of white 25- to 29-year-old high school graduates had completed 4 or more years of college, in contrast to 14 percent of blacks and 16 percent of Hispanics.**
- **During the 1970s, the percentage of white, black, and Hispanic high school graduates completing 1 or more or 4 or more years of college grew; during the 1980s, however, there was little change in these college attainment rates.**

Completing 4 years of college is an important educational accomplishment that will yield many benefits to those who achieve it. It represents the end-result of both starting college and persistent enrollment. Some students stop out, others drop out, but the vast majority of those who will ever complete 4 years of college do so by their late twenties.

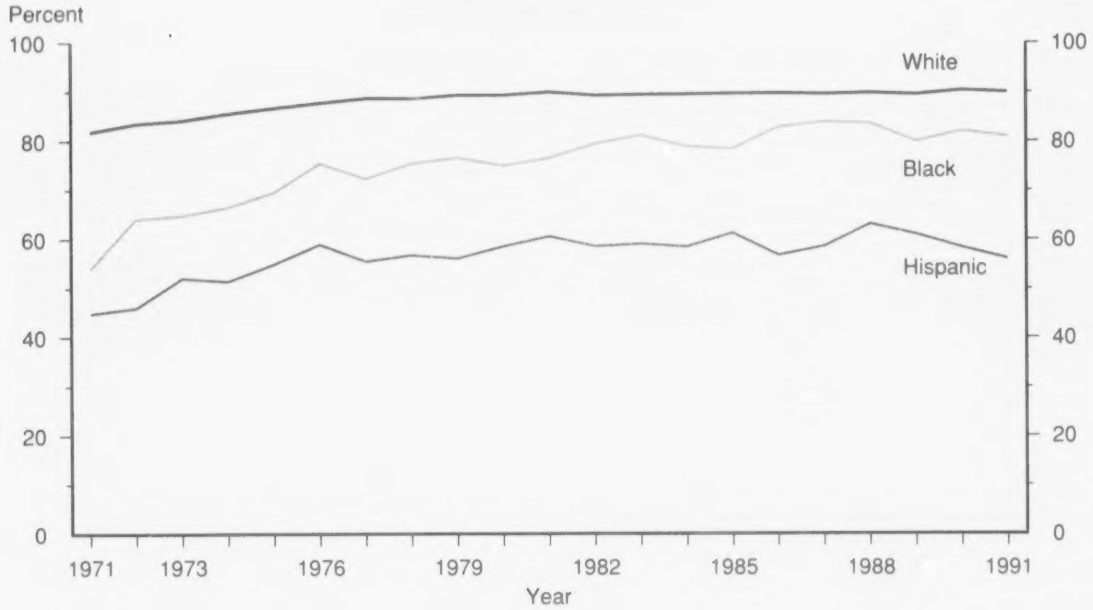
Percentage of 25- to 29-year-olds completing high school and of 25- to 29-year-old high school graduates completing 1 or more and 4 or more years of college, by race/ethnicity: 1971–1991

				High school graduates completing					
	High school graduates			1 or more years of college			4 or more years of college		
Year	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
1971	81.7	53.9	44.8	44.9	24.6	24.9	23.1	12.5	11.3
1972	83.4	64.0	45.9	46.3	33.3	29.7	24.9	13.1	8.1
1973	84.1	64.7	52.0	46.6	34.1	31.2	24.8	12.6	11.1
1974	85.5	66.4	51.3	50.4	33.5	36.1	27.2	11.8	10.6
1975	86.6	69.4	54.8	51.2	37.2	42.9	27.5	15.1	16.1
1976	87.7	75.4	58.8	53.8	38.3	37.1	29.3	17.3	12.5
1977	88.6	72.2	55.4	54.8	39.9	38.3	29.8	17.5	12.0
1978	88.5	75.3	56.6	55.9	43.3	43.7	28.9	15.6	17.1
1979	89.2	76.4	56.0	55.7	43.1	42.8	28.6	16.2	13.0
1980	89.2	74.9	58.4	53.8	40.9	40.4	28.0	15.4	13.1
1981	89.8	76.3	60.4	51.2	41.5	40.1	26.3	15.2	12.4
1982	89.1	79.2	58.4	50.7	44.6	36.9	26.7	16.0	16.6
1983	89.3	81.0	58.9	51.6	42.6	43.4	27.4	15.9	17.7
1984	89.4	78.7	58.3	51.0	41.4	45.3	27.0	14.8	18.2
1985	89.5	78.3	61.1	51.8	41.1	44.3	27.3	14.8	18.1
1986	89.6	82.6	56.6	52.3	42.8	40.4	28.1	14.3	16.0
1987	89.4	83.7	58.4	51.4	43.2	43.3	27.6	13.8	14.9
1988	89.7	83.5	63.0	51.8	43.1	45.5	28.0	14.4	17.9
1989	89.3	79.7	60.8	52.8	40.2	44.2	29.5	15.8	16.6
1990	90.1	81.8	58.2	53.6	44.1	40.2	29.3	16.4	14.0
1991	89.8	80.7	55.9	54.9	42.5	41.3	29.7	13.6	16.4

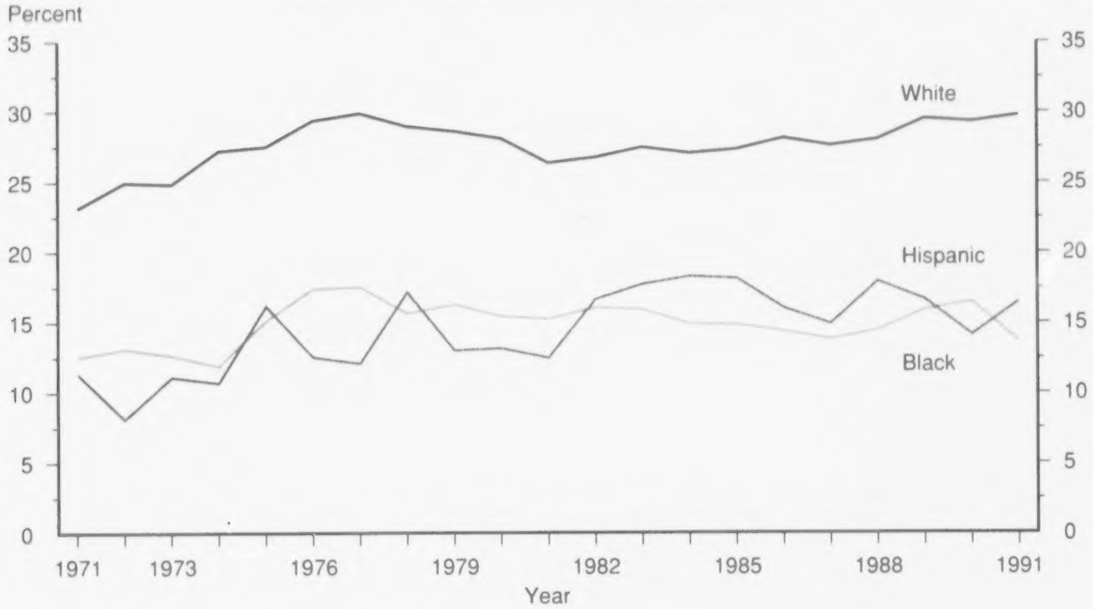
SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Percentage of 25- to 29-year-old high school graduates completing 1 or more and 4 or more years of college, by race/ethnicity: 1971–1991

Completing high school



High school graduates completing college



SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

International comparisons of educational attainment, by age

- **Compared to other large industrialized countries, the United States has the most educated population. A higher percentage of 25- to 64-year-olds in the United States has completed secondary school and college than in Japan, Germany, the United Kingdom, France, Italy, or Canada.**
- **In Japan, Germany, and Canada, 25- to 34-year-olds have completed secondary education at rates similar to their counterparts in the United States.**
- **Young men in Japan were much more likely to have completed higher education than men in the other highly industrialized countries. Young men in the United States ranked second.**
- **Young women in the United States were much more likely to have completed higher education than women or men in other countries (with the exception of men in Japan).**

The percentage of the population completing secondary and higher education in the United States and other highly industrialized countries provides an indication of the skill level of the U.S. workforce as compared to its economic competitors. Furthermore, contrasting the educational attainment of the general population to the attainment of younger age cohorts provides a means of comparing past and recent progress in the rate at which individuals complete high school or college.

Percentage of population in large industrialized countries who have completed secondary and higher education, by age, sex, and country: 1989

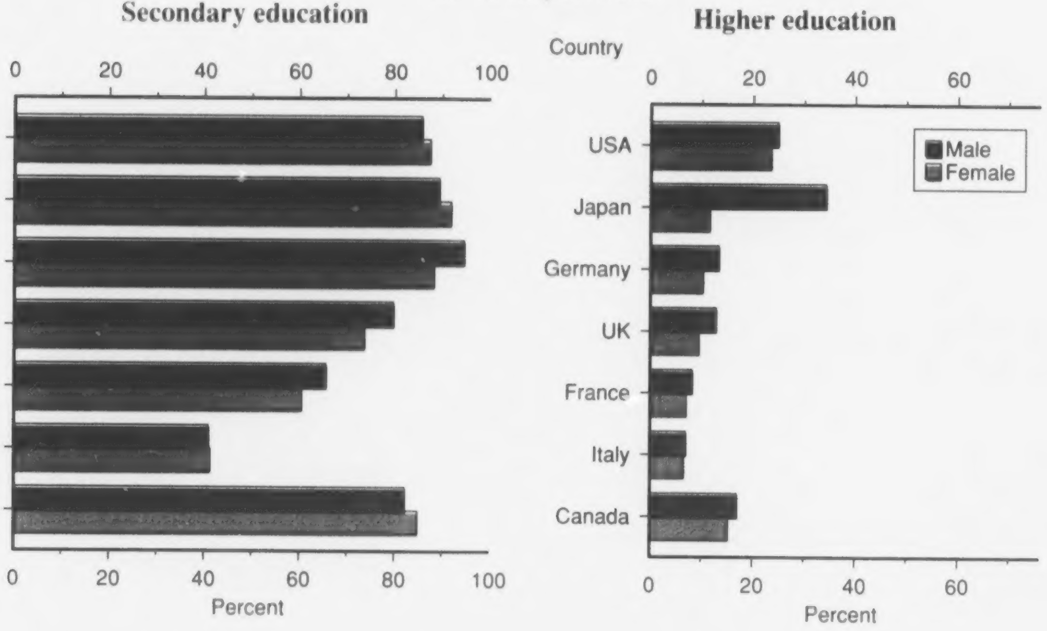
	25-64 years old		25-34 years old					
	Both sexes		Both sexes		Male		Female	
Country	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
United States	82.0	23.4	86.6	24.2	85.7	24.9	87.4	23.5
Japan	69.7	13.3	90.6	22.9	89.3	34.2	91.8	11.5
Germany	78.4	10.2	91.5	11.8	94.5	13.3	88.2	10.3
United Kingdom	64.5	9.2	76.7	11.2	79.7	12.8	73.7	9.5
France	48.1	7.0	63.0	7.6	65.6	8.1	60.4	7.1
Italy	25.7	5.7	41.1	6.7	40.9	6.9	41.2	6.5
Canada	71.4	15.1	83.5	16.1	82.1	16.9	84.8	15.2

NOTE: In the United States, completing (upper) secondary school is defined as completing high school; completing higher education is defined as completing 4 or more years of college.

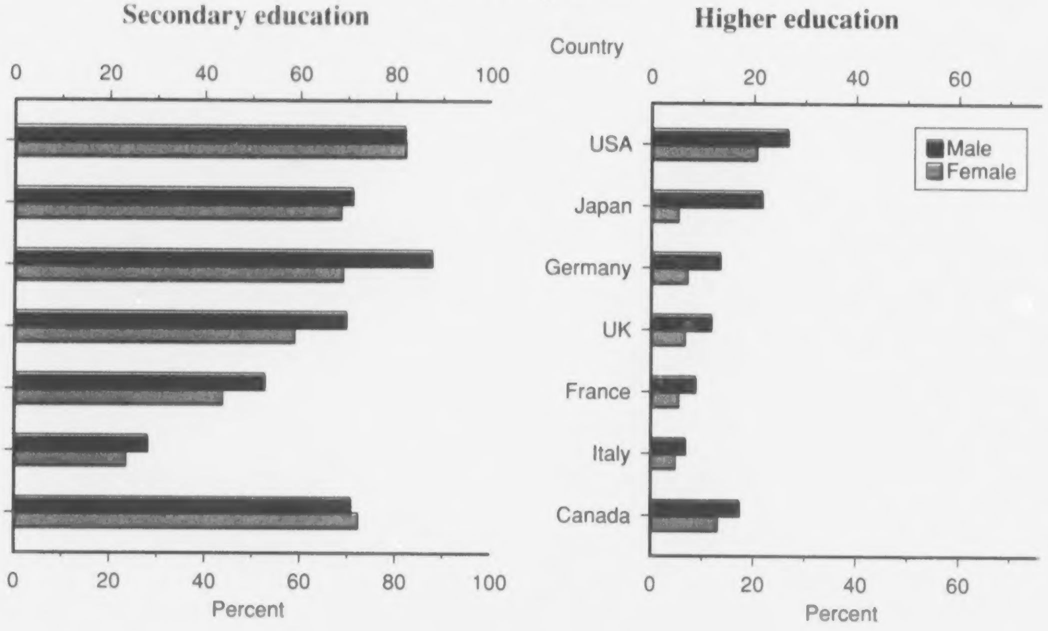
SOURCE: Organization for Economic Cooperation and Development, Center for Educational Research and Innovation, International Indicators Project.

Percentage of population completing secondary and higher education, by age, sex, and country: 1989

25- to 34-year-olds



25- to 64-year-olds



SOURCE: Organization for Economic Cooperation and Development, Center for Educational Research and Innovation, International Indicators Project.

Degree attainment, by race/ethnicity and sex

- **During the last half of the 1980s, the number of bachelor's degrees earned by white women increased and the number earned by white men remained stable despite a decline in the number of whites graduating from high school early in the decade.**
- **The pattern of change in bachelor's degrees earned between 1977 and 1990 was different for black men and women. The number earned by men declined each year except for the most recent one, whereas the number earned by women fluctuated up and down. Compared to 1981 levels, the number earned in 1990 was down 5 percent among men and up 5 percent among women.**

> *The ability of our colleges and universities to attract and retain minority students is important to the Nation's success in achieving its goal of equal opportunity. Changes in the number of degrees earned by minorities and by whites measure higher education's progress toward this goal.*

- **The number of bachelor's degrees earned by Hispanic men and women increased substantially between 1977 and 1990. The growth rate was higher among women than among men.**
- **The number of advanced degrees earned by black men and women and by white men declined sharply between the mid-1970s and mid-1980s. Recent data suggest a halt to or possible reversal of this pattern (supplemental table 24-1).**

Index of the number of bachelor's degrees conferred and the number of high school completions (1981=100), by race/ethnicity: Selected academic years ending 1977–1990

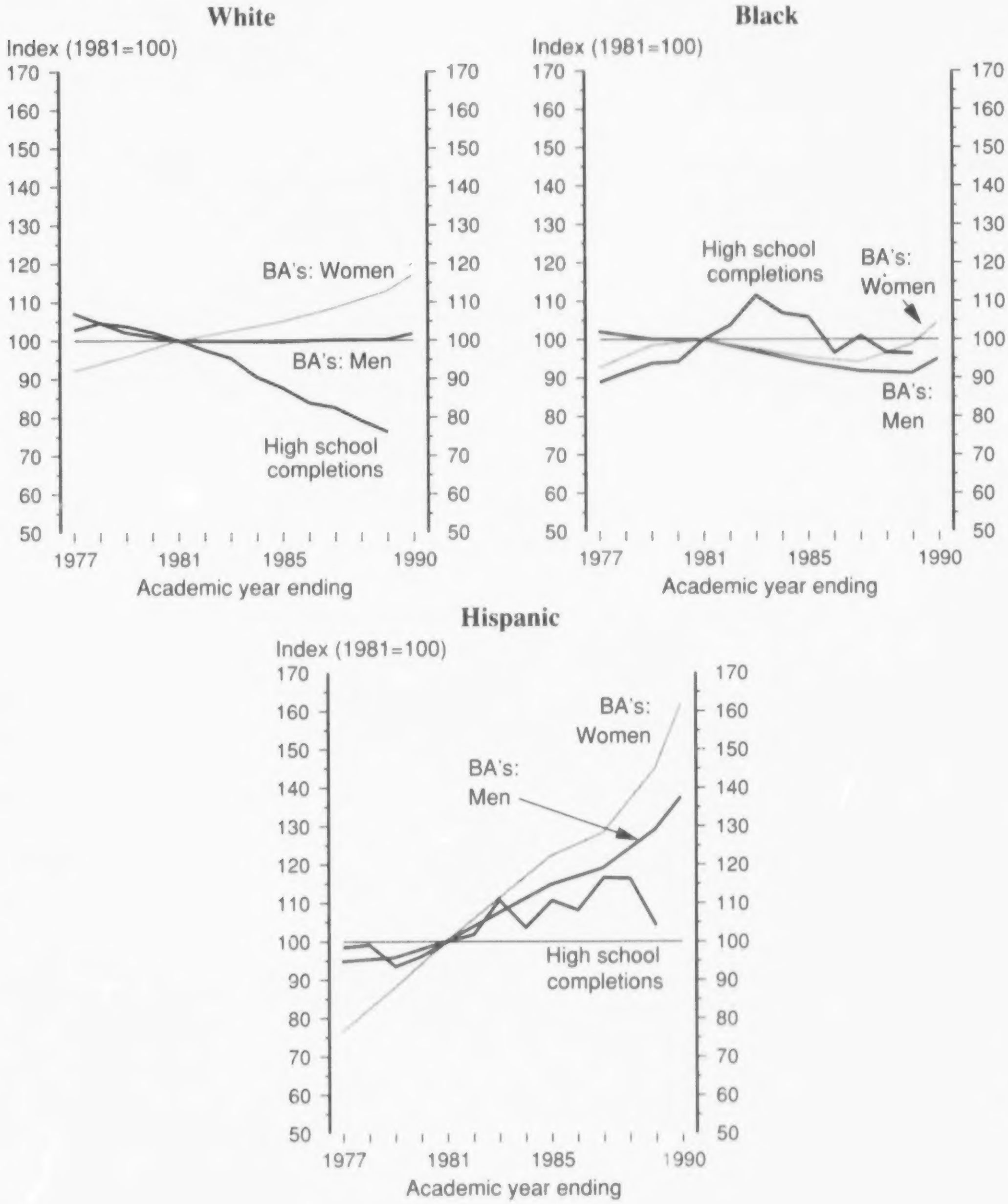
Academic year ending	White			Black			Hispanic		
	Degrees		High school completions	Degrees		High school completions	Degrees		High school completions
	Men	Women		Men	Women		Men	Women	
1977	107.3	92.1	102.8	102.1	92.6	88.8	94.7	76.4	98.4
1979	102.2	95.8	103.7	100.1	98.4	93.7	95.8	87.8	93.5
1981	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1985	99.7	105.0	87.5	93.9	95.3	105.8	114.7	122.2	110.6
1987	100.1	108.5	82.5	91.8	94.2	100.9	119.0	128.2	116.5
1989	100.2	112.8	76.1	91.2	98.7	96.3	129.0	144.8	104.1
1990	101.8	117.0	—	95.0	104.5	—	137.6	161.6	—

—Not available.

NOTE: High school completions include diplomas and GED credentials. The index of completions is based on a 3-year moving average of the number of completions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred. U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Index of the number of bachelor's degrees conferred and the number of high school completions (1981=100), by race/ethnicity: Selected years 1977–1990



NOTE: High school completions are plotted annually and degrees are plotted for 1977, 1979, 1981, 1985, 1987, 1989, and 1990. High school completions include diplomas and GED credentials. The index of high school completions is based on a 3-year moving average of the number of completions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred. U.S.Department of Commerce, Bureau of the Census, October Current Population Survey.

Course-taking in academic, vocational and personal use education among high school graduates

- **On average, a high school graduate in 1987 earned a larger number of total course units than a high school graduate in either 1969 or 1982.**

Recent reports have called for both academic rigor in preparing students for education beyond high school, and for a workforce prepared for the challenges of the 21st century. Course-taking patterns in academic, vocational, and personal use education indicate the extent to which students are being prepared for these opportunities.

- **Of the total course units earned by graduates in 1987, on average about 7 in 10 were academic units, 2 in 10 were vocational units, and 1 in 10 were personal use units.**
- **Overall, high school graduates in 1982 or 1987 earned a smaller percentage in *academic* units than did graduates in 1969.**
- **High school graduates in 1982, overall, earned a larger percentage in *vocational* units than did graduates in either 1969 or 1987.**
- **In 1987, blacks, Hispanics and whites accumulated a similar percentage of vocational education units. This was not the case in 1969 when blacks and Hispanics earned a higher percentage of vocational units.**
- **In 1969, females earned a larger percentage in vocational units than male graduates. In 1982 and 1987 females and males earned about the same percentage of vocational units.**

Total number of Carnegie units earned by high school graduates, by sex and race/ethnicity; and curriculum track units as a percentage of total Carnegie units earned by high school graduates, by sex and race/ethnicity: 1969, 1982 and 1987

	Total number of Carnegie units			Curriculum track units as a *percentage*[1] of total Carnegie units								
				Academic			Vocational			Personal use		
Characteristic	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	20.5	21.3	22.8	73.0	66.0	68.5	18.0	21.9	19.7	9.0	12.1	11.8
Sex												
Male	20.2	21.2	22.7	74.2	65.3	67.3	16.6	21.9	20.2	9.1	12.7	12.5
Female	20.7	21.5	22.9	72.1	66.6	69.6	19.1	21.9	19.3	8.8	11.4	11.1
Race/ethnicity												
White	20.3	21.4	22.9	75.1	66.9	68.5	16.7	21.3	20.0	8.1	11.7	11.5
Black	20.7	21.0	22.1	65.6	64.8	67.5	22.9	22.8	20.4	11.4	12.2	12.2
Hispanic	21.8	21.1	22.5	61.9	61.4	66.7	23.3	24.9	19.2	14.8	13.4	14.1
Asian/Pacific Is.	22.9	22.1	23.9	68.2	71.5	74.1	16.7	14.4	12.5	15.2	13.9	13.3
American Indian[2]	—	21.3	23.2	—	62.6	66.4	—	23.7	20.3	—	13.5	13.4

— Not available.

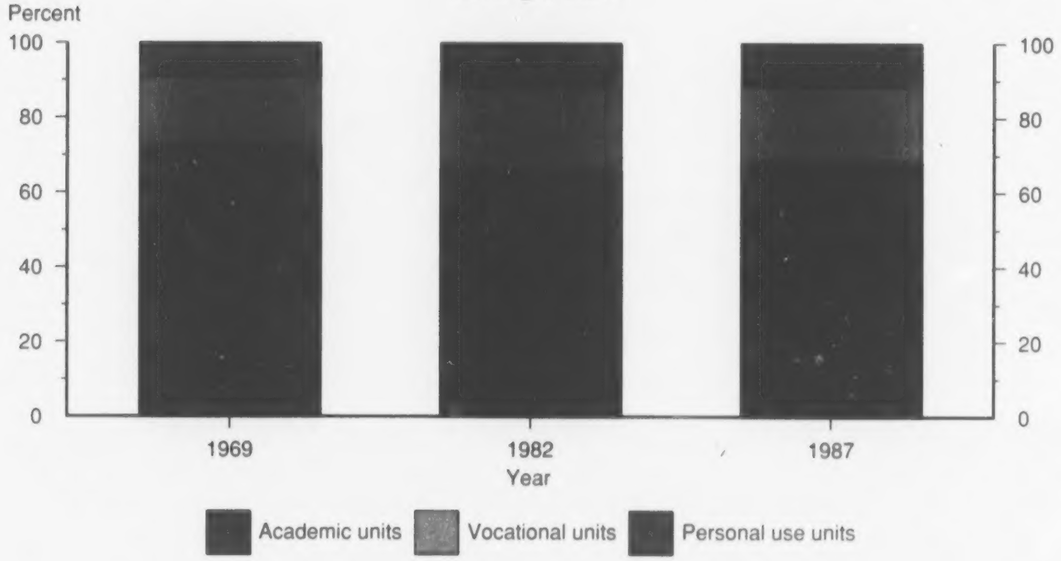
[1] Percentage refers to the average percentage for all students. That is, the percentage was calculated separately for each student and then averaged for all students.

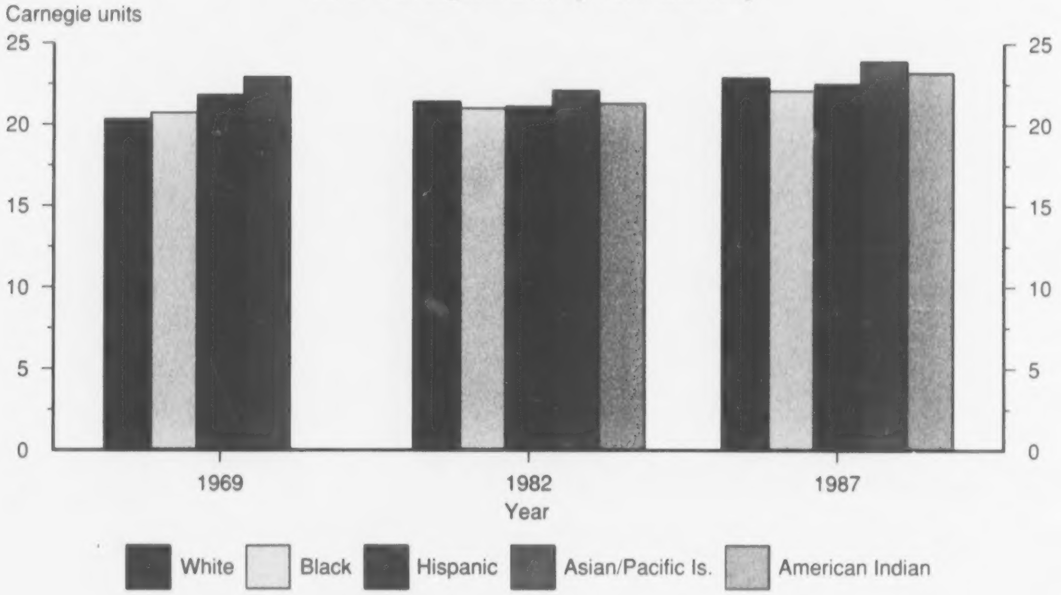
[2] The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

NOTE: Course units refer to Carnegie units which are a standard of measurement that represents one credit for the completion of a 1-hour 1-year course. For descriptions of academic, vocational, and personal use, see note to supplemental table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction, High School and Beyond, base year study, 1987 High School Transcript Study.

Total high school course units taken by high school graduates: 1969, 1982 and 1987


Curriculum track units as a percentage of total Carnegie units


Total Carnegie units, by race/ethnicity

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction, High School and Beyond, base year study, 1987 High School Transcript Study.

Field of study, by race/ethnicity and sex

- **Among doctorate recipients, black women are far more likely to major in education than other race-sex groups. Over 50 percent of black women earning doctorates in 1990 majored in that field.**
- **At all degree levels, Asian men are much more likely than white men to major in the computer sciences and engineering, whereas, with two exceptions, all other race-sex groups are less likely to do so. The exceptions are Hispanic men at the bachelor's level and Asian women at the master's level.**

The fields pursued by college students affect the career opportunities open to them. The race-sex field concentration ratio shows how much the majors of students from various race/sex groups differ from those of white men. Ratios above 1 indicate that a group is more likely than white men to major in a field, and ratios below 1 indicate the opposite.

- **At both the bachelor's and doctor's levels, black men and non-Asian women are less likely than other groups to major in the natural sciences.**
- **Hispanic women are the most and Asian men the least likely of the race-sex groups to major in the humanities and social/behavioral sciences at the bachelor's and doctor's levels.**
- **At the bachelor's level, American Indians major in education to a greater extent than other racial/ethnic groups (supplemental tables 1 and 2).**

Race-sex field concentration ratio, by race/ethnicity, sex, degree level and field of study: Academic year ending 1990

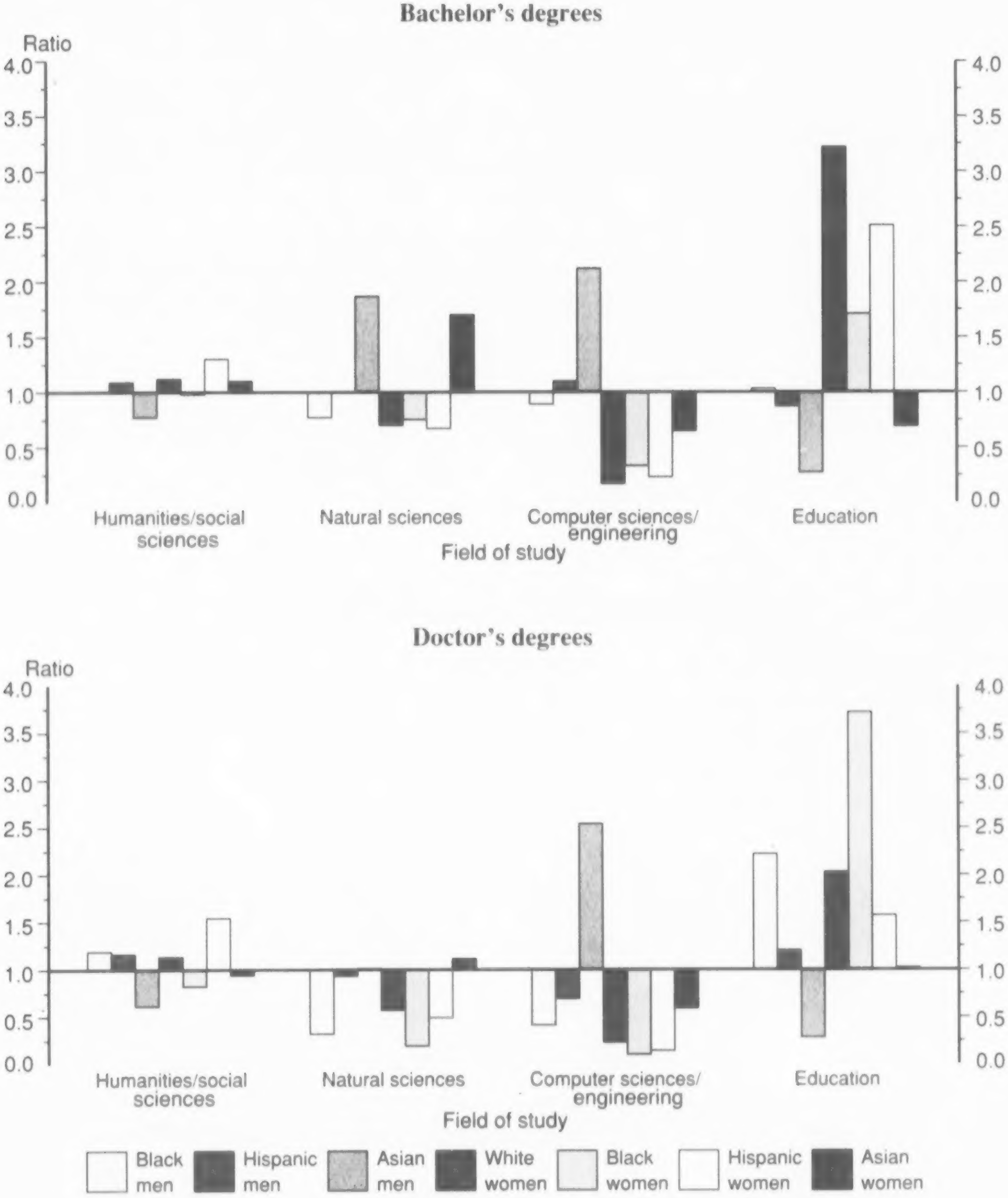
	Men			Women			
	Black	Hispanic	Asian	White	Black	Hispanic	Asian
Bachelor's degrees							
Humanities and social/behavioral sciences	1.00	1.09	0.77	1.12	0.98	1.30	1.10
Natural sciences	0.77	1.00	1.87	0.70	0.75	0.67	1.70
Computer science and engineering	0.89	1.10	2.12	0.17	0.33	0.23	0.65
Education	1.03	0.87	0.27	3.22	1.71	2.51	0.69
Business and management	0.98	0.87	0.67	0.74	0.90	0.73	0.87
Other technical/professional*	1.30	0.99	0.56	1.69	1.98	1.48	1.20
Doctor's degrees							
Humanities and social/behavioral sciences	1.19	1.16	0.61	1.13	0.82	1.54	0.94
Natural sciences	0.32	0.93	1.01	0.57	0.19	0.49	1.11
Computer science and engineering	0.41	0.69	2.54	0.23	0.10	0.14	0.59
Education	2.22	1.20	0.28	2.03	3.72	1.57	1.02
Business and management	0.97	0.58	1.92	0.72	0.17	0.19	0.65
Other technical/professional*	1.25	0.92	0.91	1.36	1.21	1.23	1.53

* Principally composed of health sciences, communications, and communication technologies at the bachelor's degree level and of health sciences, agriculture, and natural resources at the doctor's degree level. See glossary definition for technical/professional fields.

NOTE: The race-sex field concentration ratio is calculated as the percentage of degrees conferred to a particular race/ethnicity sex group in a specific field divided by the percentage of degrees conferred to white men in the same field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Race-sex field concentration ratio, by degree level, field of study, race/ethnicity, and sex: Academic year ending 1990



NOTE: The race-sex field concentration ratio is calculated as the percentage of a race/ethnicity/sex group earning degrees who majored in a specific field divided by the percentage white men earning degrees who majored in the same field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Graduate field of study, by sex

- **The concentration ratio (see box) in education grew substantially between 1971 and 1990 at both the master's and doctor's levels. At the master's level, the increase was due to the fact that interest in an education major declined at a higher rate among men than among women.**

The female field concentration ratio shows how much the fields studied by women differ from those studied by men. Ratios above 1 indicate that women are more likely than men to major in a field, and ratios below 1 indicate the opposite. Changes in the ratio show whether differences in the field preferences of men and women are narrowing or widening. They thus point to possible future changes in the occupations and earnings potential of women compared with men.

- **The concentration ratio in the natural sciences was about the same in 1990 as in 1971 at both the master's and doctor's degree levels.**
- **Differences in the proportions of men and women majoring in business at the master's degree level narrowed between the mid-1970s and mid-1980s. Nevertheless, in 1990, men were more than twice as likely as women to earn master's degrees in this field.**
- **In 1990, the concentration ratio in the humanities was close to parity at both the master's and doctor's levels.**

Female field concentration ratio: Selected academic years ending 1971–1990

	Humanities	Social/ behavioral sciences	Natural sciences	Computer sciences and engineering	Education	Business	Other technical/ professional[1]
				Master's degrees			
1971	1.58	0.65	0.49	0.03	1.92	0.06	1.61
1975	1.32	0.63	0.42	0.05	2.03	0.11	1.30
1978	1.16	0.71	0.43	0.09	2.25	0.22	1.31
1981	1.03	0.84	0.44	0.12	2.47	0.33	1.46
1984	1.08	0.97	0.53	0.18	2.63	0.44	1.64
1987	1.05	0.99	0.55	0.20	2.71	0.47	1.73
1990[2]	1.05	1.01	0.57	0.19	2.83	0.46	1.73
				Doctor's degrees			
1971	1.89	1.25	0.68	0.04	1.62	0.18	0.85
1975	1.59	1.20	0.62	0.09	1.65	0.16	0.90
1978	1.32	1.18	0.57	0.08	1.78	0.25	1.00
1981	1.15	1.19	0.57	0.11	1.99	0.39	1.07
1984	1.08	1.30	0.57	0.12	2.02	0.52	1.18
1987	1.08	1.35	0.61	0.15	2.24	0.57	1.31
1990[2]	1.06	1.49	0.65	0.18	2.39	0.57	1.32

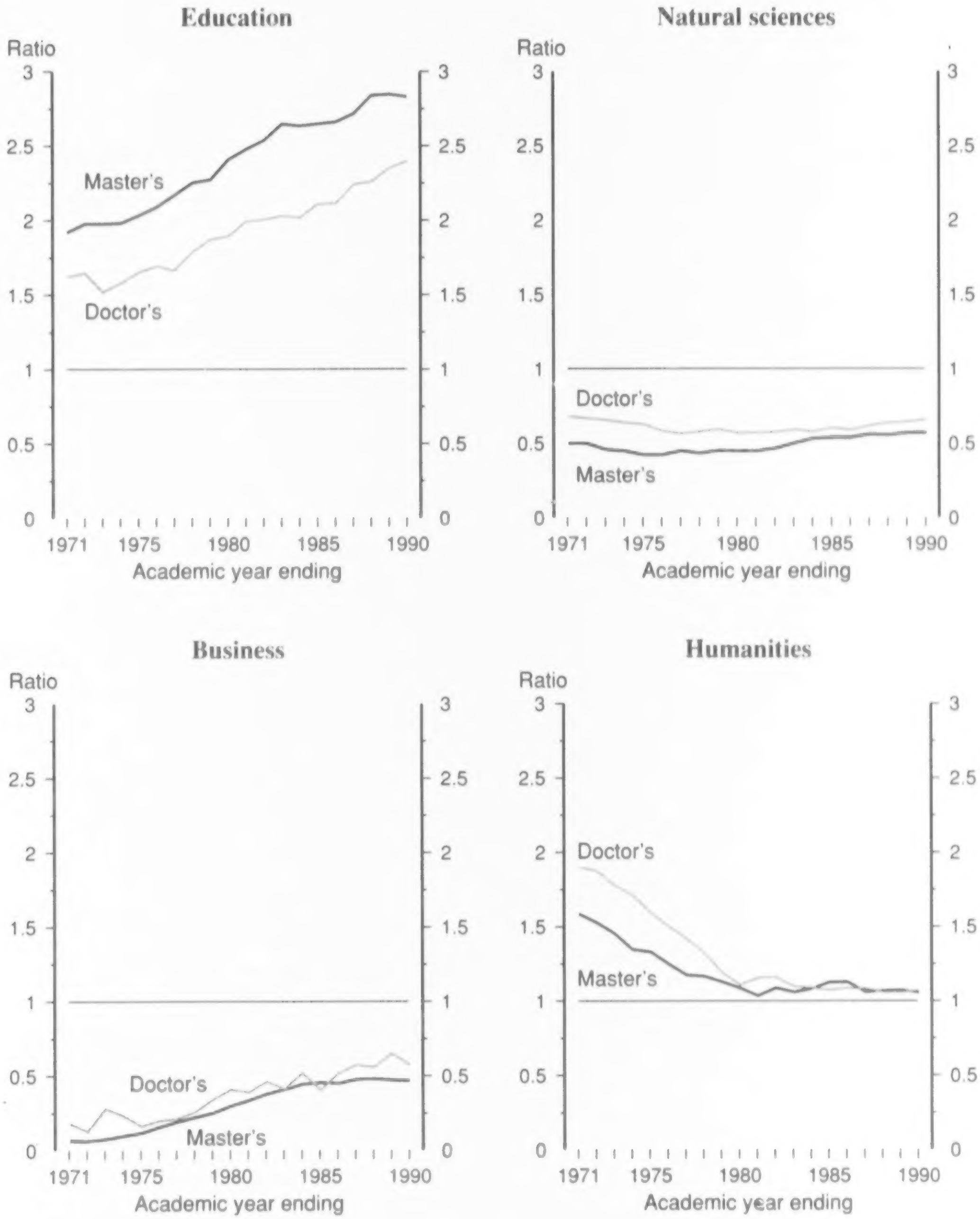
[1] Principally composed of health sciences and public affairs at the master's degree level and of health sciences, agriculture, and natural resources at the doctor's degree level. See glossary definition for technical/professional fields.

[2] Preliminary.

NOTE: The female field concentration ratio is calculated as the percentage of women earning degrees who majored in a specific field divided by the percentage of men earning degrees who majored in the same field. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Female field concentration ratio, by field of study and degree level: Academic years ending 1971-1990



NOTE: The female field concentration ratio is calculated as the percentage of women earning degrees who majored in a specific field divided by the percentage of men earning degrees who majored in the same field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Science and engineering degrees conferred

> *Concerns about the nation's economic competitiveness have focused attention on the study of science and engineering in our educational institutions. Trends in the number and percentage of degrees conferred in these fields shed light on this issue.*

- **The number of bachelor's degrees earned in the natural sciences fell during the last half of the 1980s, whereas the total number of degrees at this level increased. As a result, the proportion of bachelor's degrees in these fields dropped from 7.9 percent in 1985 to 6.5 percent in 1990 (supplemental table 2).**
- **Doctorate degrees in the natural sciences grew in tandem with total doctorates from the mid-1970s to 1990.**
- **At the bachelor's level, computer science and engineering degrees grew in both absolute and relative terms during the first half of the 1980s but declined during the last half of the decade.**
- **Degrees in the computer sciences and engineering grew much faster than total degrees during the early and mid-1980s at both the master's and doctor's level.**

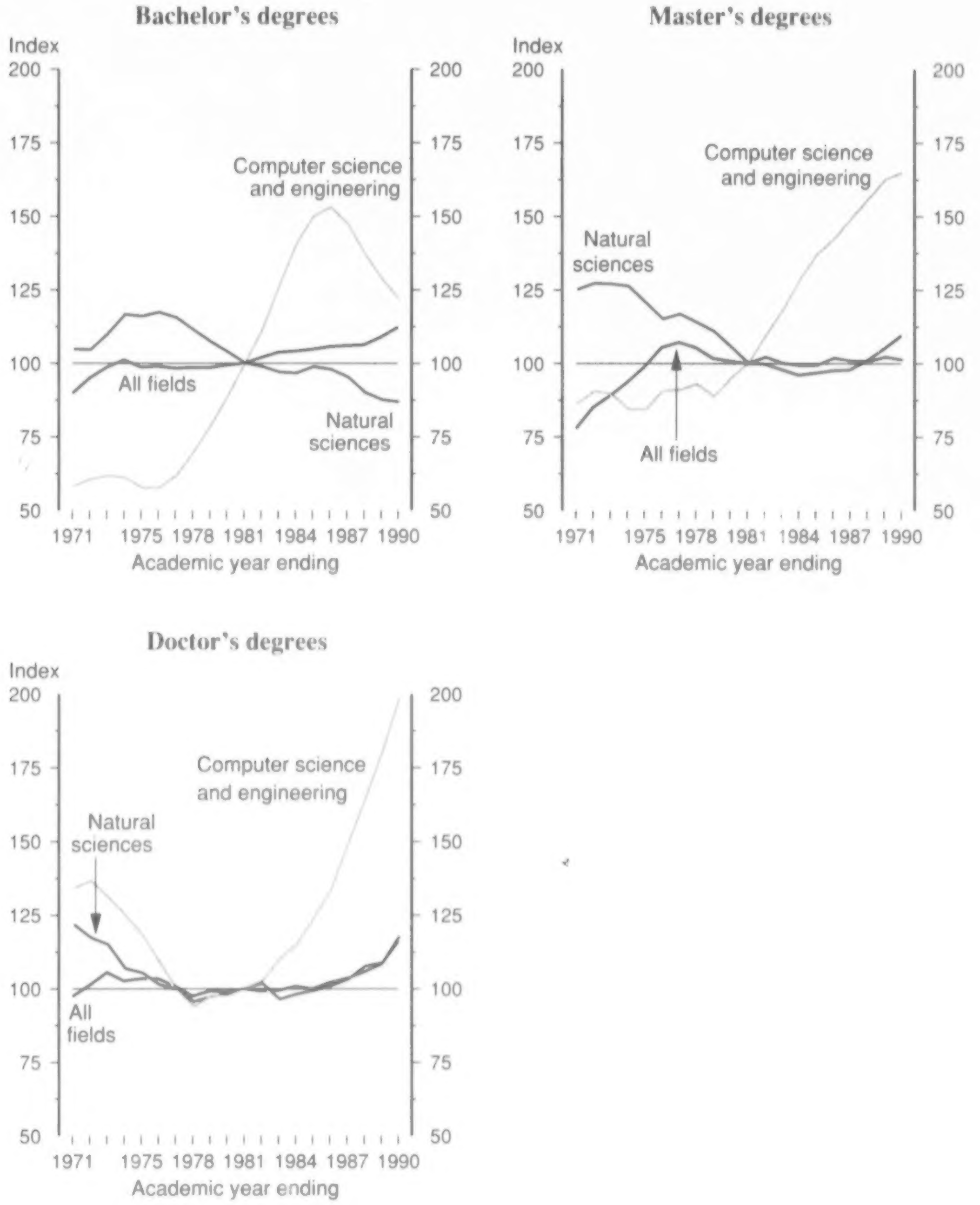
Index of number of degrees and percentage of total degrees conferred in the natural sciences and in the computer sciences and engineering, by degree level: Selected academic years ending 1971-1990

Field of study	1971	1975	1978	1981	1984	1987	1990*
				Index of number of degrees (1981=100)			
Bachelor's degrees							
All fields	89.8	98.7	98.5	100.0	104.2	106.0	112.2
Natural sciences	104.7	115.9	111.3	100.0	96.5	95.3	86.8
Computer sciences and engineering	58.2	57.6	69.7	100.0	140.5	147.3	121.6
Master's degrees							
All fields	77.9	98.9	105.4	100.0	96.1	97.9	109.5
Natural sciences	125.0	120.6	113.8	100.0	99.2	100.7	101.1
Computer sciences and engineering	86.2	84.3	72.9	100.0	128.3	149.0	164.8
Doctor's degrees							
All fields	97.4	103.4	97.5	100.0	100.8	103.5	116.0
Natural sciences	121.7	105.2	95.5	100.0	98.0	103.1	117.7
Computer sciences and engineering	133.9	118.1	93.7	100.0	114.9	149.1	198.6
				Percent of total degrees			
Bachelor's degrees							
Natural sciences	9.8	9.8	9.5	8.4	7.8	7.5	6.5
Computer sciences and engineering	6.2	5.6	6.8	9.6	13.0	13.4	10.4
Master's degrees							
Natural sciences	7.5	5.7	5.1	4.7	4.8	4.8	4.3
Computer sciences and engineering	7.8	6.0	6.2	7.1	9.4	10.8	10.7
Doctor's degrees							
Natural sciences	28.8	23.4	22.6	23.0	22.4	22.9	23.3
Computer sciences and engineering	11.7	9.7	8.2	8.5	9.7	12.3	14.6

NOTE: Includes degrees conferred to U.S. and non-U.S. citizens.
*Preliminary.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Index of the number of degrees conferred in the natural sciences and in the computer sciences and engineering (1981=100), by degree level: 1971-1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred.

Economic and Other Outcomes of Education

Education is an investment in human skills. Like all investments, it involves both a cost and a return. The cost of finishing high school is quite low, for it principally includes the earnings given up by not working or not working full time while in high school. In this case, the earnings given up are the earnings of high school dropouts 16–19 years old, which are low. The cost of attending college is higher, but principally includes tuition, books, and fees, and the earnings given up by not working or by working part time while in college. In contrast, the returns come in many forms. Some are monetary, others personal, social, cultural, and more broadly economic. Some are directly related to the labor market, others are not. Some accrue to the individual, others to society and the nation in general. Among the returns related to the labor market are better employment opportunities, jobs that are less sensitive to general economic conditions, better opportunities to participate in employer-provided training, and higher earnings. Other returns not related to the labor market and often attributed to education include greater interest and participation in civic affairs, better health and longer life, and reduced criminal behavior.

The costs and returns to investing in postsecondary education change over time,[1] which affects the incentive for individuals to participate. Measures presented in this section illuminate changes in the rewards to finishing high school, or conversely, the penalties of not finishing, and changes in the rewards of investing in postsecondary education.

These indicators suggest some general conclusions regarding the penalties of not finishing high school. First, the immediate difficulty of making the transition from full-time school attendance to full-time work appears much greater for those who leave school before finishing high school. In October 1990, of young people who had left high school during the previous year without finishing only 47 percent were employed. In contrast, of those who had graduated from high school in 1990 and did not enroll in college, 68 percent were employed (*Indicator 29*). Among college graduates in 1986 not continuing to graduate school, the employment rate was more than 90 percent 1 year after graduation.[2]

In time, some of the problems of making the transition from school are solved. For example, of males who graduated from high school in 1990 and did not enroll in college the following October, 74 percent were employed (Table 29-1). Among males 25 to 34 years old with 12 years of schooling, 85 percent were employed (*Indicator 30*). This suggests that as high school graduates who do not go on to college get older, the percentage employed rises. Nevertheless, how long it takes to solve the initial transition to work problem is an indication of its difficulty.

Second, labor market opportunities for high school graduates, at any age, have consistently been better than for those who have not finished high school. For males 25–34 years old, 85 percent of high school graduates were employed in 1991 versus 70 percent of those who had not finished high school. For females, the disparity was even greater—67 versus 42 percent (*Indicator 30*). On the other hand, labor market opportunities for males seem to have worsened in the last 20 years for both high school graduates and dropouts, although the decline was larger for the dropouts. For example, the employment rate of male high school graduates 25–34 years old averaged 91 percent between 1971 and 1979, but 86 percent between 1980 and 1990.

Third, beyond lower employment rates, among those who find work during the year, earnings are lower for those with less education. Between 1986 and 1990, the earnings penalty of not finishing high school (compared to finishing and not continuing on to college) was an average of 27 and 28 percent for white and black males, respectively. The earnings penalty was larger for females—39, 42, and 34 percent for whites, blacks, and Hispanics, respectively. For white males, there is some evidence that the earnings penalty is growing (*Indicator 31*).

Turning to college education first, labor market opportunities for male college graduates were strong and fell very little during recession years. Consistently over 90 percent of college graduates men were employed. On the other hand, the labor market opportunities for male high school graduates fell more during economic recessions (*Indicator 30*). The ratio of average annual earnings of college graduates to those of high school graduates provides an indication of the incentive to attend college. For white males 25–34 years old, the college premium increased from about 15 percent during the mid 1970s to over 40 percent in the late 1980s and 1990. For black males the college premium was even larger. Overall, the earnings premium of college graduates in recent years is at its highest levels of the 1970–1990 period (*Indicator 31*).

Second, labor market opportunities for women, both high school graduates and those who attend college, grew enormously between 1971 and 1991. The proportion of females 25–34 years old with 4 or more years of college who were employed increased from 57 to 83 percent over the period. The proportion of high school graduate women employed grew from 43 to 67 percent over the same period (*Indicator 30*). The earnings advantage enjoyed by college graduate women over their high school graduate counterparts was even larger than it was for men.[3] For white females 25–34 years old, the advantage was 89 percent in 1990. For black women it was 109 percent. These were among the highest earnings premiums enjoyed by college women during the 1970–1990 period (*Indicator 31*).

While there is a great earnings premium for graduating from college, there are great differences among college graduates who chose different fields of study (*Indicator 2:14, 1991*). Computer science and engineering majors earn the highest starting salaries—36 percent above the average across all fields among 1986 graduates. Education majors earn the lowest starting salaries—18 percent below the average. College students appear to be sensitive to these differences. The percentage majoring in engineering and computer science increased from 9 to 17 percent between 1977 and 1986. The percentage majoring in education fell from 18 to 9 percent over the same period.[4]

There is a strong positive relationship between voting and educational attainment. Those with the most education are the most likely to vote. For example, in 1990, within the population aged 25–44, college graduates were 67 percent more likely and high school dropouts were 48 percent less likely to vote than high school graduates. Also, differences in voting behavior, by education, have widened over time among 25- to 44-year-olds (*Indicator 32*). Many factors may influence this relationship. On the one hand, those with more education may feel a greater responsibility to vote than those with less education. On the other hand, those with more education generally have a greater value of their time and usually are less likely to engage in activities that require more time than money.

NOTES:

1. See Murphy, Kevin and Finis Welch. "Wage Premiums for College Graduates: Recent Growth and Possible Explanations," *Educational Researcher*, May 1989 for a more detailed presentation of changes between 1964 and 1986 in the relative earnings of workers with different levels of education and experience by sex and race.

2. U.S. Department of Education, Survey of Recent College Graduates, 1987, unpublished tabulation.

3. However, women who are college graduates earn less on average than their male counterparts.

4. Changes in employment opportunities for teachers are affected by the changing enrollment of elementary and secondary school children. Between 1971 and 1984 enrollment declined but since has been rising slowly (*Indicator 34*).

Transition from high school to work

- **Fewer than half of recent high school dropouts had a job in October 1990. Recent high school graduates fared better—68 percent had jobs. However, almost a third—32 percent—were either unemployed or not looking for work.**
- **In 1990, only 45 percent of black recent high school graduates were employed compared to 75 percent of white graduates. Only 31 percent of recent black high school dropouts were employed, compared to 56 of their white counterparts.**
- **The gap in employment rates between recent high school graduates and high school dropouts has grown slightly during the last three decades, but it has grown more among blacks than among whites.**

The transition from high school to work can be difficult. Without prior job experience or specialized training, school leavers may find it more difficult to win jobs, and they may be dissatisfied with those that they do find. The employment rate among school leavers, both those who have not finished high school and those who have but did not go on to college, is an indication of the ease of making the transition.

Employment rate for recent high school dropouts and high school graduates not enrolling in college, by race/ethnicity: Selected years 1960–1990

	Recent high school graduates				Recent high school dropouts			
Year	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1960	65.0	—	—	—	50.9	—	—	—
1962	68.3	—	—	—	40.4	—	—	—
1964	63.4	—	—	—	41.6	—	—	—
1966	64.9	—	—	—	51.4	—	—	—
1968	67.3	—	—	—	50.0	—	—	—
1970	63.2	—	—	—	44.7	—	—	—
1972	70.1	—	—	—	46.0	—	—	—
1973	70.7	74.9	49.8	(*)	51.5	55.1	43.9	(*)
1974	69.1	72.9	45.9	(*)	48.1	53.9	35.9	(*)
1975	65.1	68.9	36.9	(*)	41.4	46.2	22.0	46.8
1976	68.9	73.2	38.5	(*)	43.5	49.7	20.8	(*)
1977	71.9	76.1	43.3	65.8	50.2	56.6	34.5	(*)
1978	74.0	79.1	45.9	69.2	49.7	54.2	41.1	50.7
1979	72.4	76.4	44.1	69.4	48.8	54.2	27.6	(*)
1980	68.9	74.6	35.0	(*)	43.7	51.2	20.8	47.7
1981	65.9	73.0	31.5	(*)	40.5	51.2	11.5	50.0
1982	60.4	68.5	29.4	43.9	36.8	44.5	16.4	(*)
1983	62.9	69.8	34.9	(*)	43.2	49.4	26.5	(*)
1984	64.0	70.7	44.8	49.0	42.9	51.3	23.8	35.7
1985	62.0	71.0	34.4	(*)	43.5	50.0	29.3	37.6
1986	65.2	71.5	41.0	64.9	46.1	50.5	31.6	46.4
1987	68.9	75.3	46.9	53.8	41.2	48.1	26.1	(*)
1988	71.9	78.2	55.5	57.1	43.5	47.6	17.3	55.4
1989	71.9	77.6	53.5	49.3	47.1	57.6	26.3	(*)
1990	67.5	75.1	44.9	(*)	46.7	56.2	30.5	(*)

— Not available.

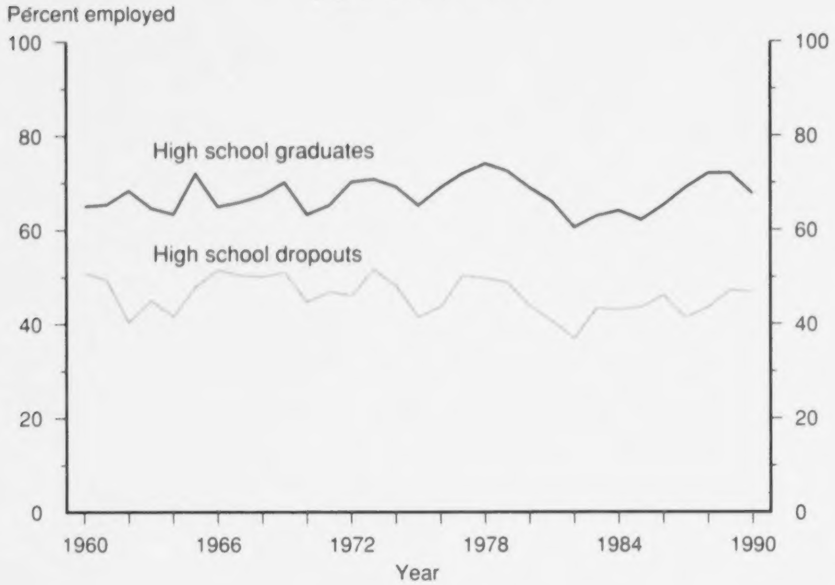
* Too few sample observations for a reliable estimate.

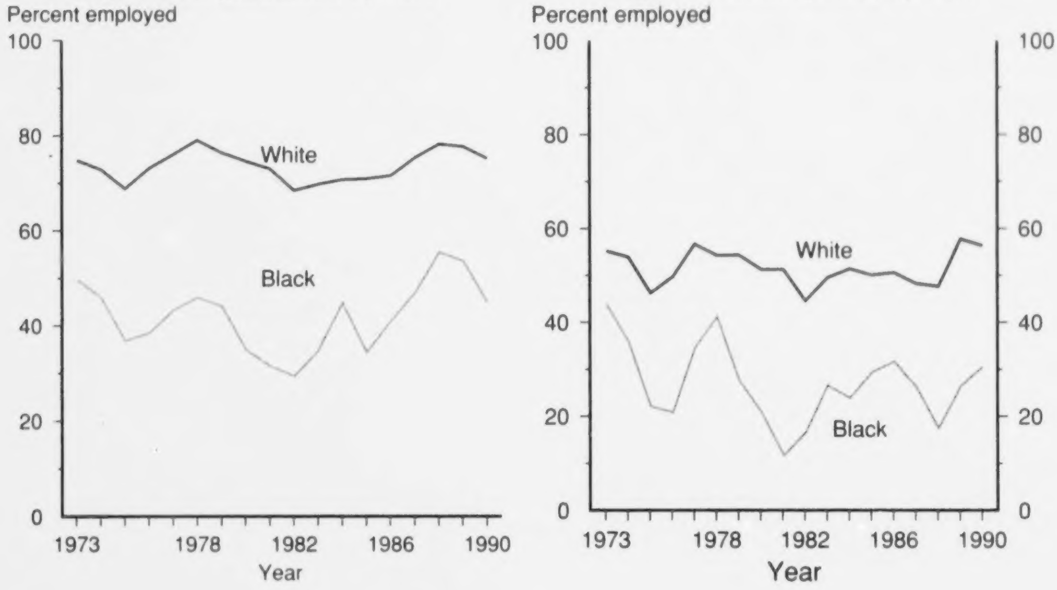
NOTE: Recent high school graduates are individuals who graduated during the survey year. Recent high school dropouts are individuals who were not high school graduates, who were in school a year earlier, but who were not enrolled during the survey year month.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940–1987*, and tabulations based on the October Current Population Surveys.

Employment rate of recent high school dropouts and high school graduates not enrolling in college, by race: 1960–1990

By graduation status




High school graduates, by race

High school dropouts, by race

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940–1987*, and tabulations based on the October Current Population Surveys.

Employment of young adults

- **Employment rates are generally higher for those with more education, especially for women.**
- **During economic recessions (such as 1982–83 and 1991), employment rates among males with 12 years of schooling or less fell more than they did for college graduates. The same was true, but to a lesser extent, for females with no college education.**
- **Between 1971 and 1991, among women 25–34 years old, the employment rate for those with 12 years of school, 1–3 years of college, and 4 or more years of college increased by 24, 29, and 26 percentage points, respectively, versus only 7 percentage points for those with 9–11 years of schooling.**

The percentage of a population group with jobs is influenced by a variety of factors. Some influence the willingness of employers to offer jobs to individuals with different levels of education at the going wage rate, and others influence the willingness of these individuals to take jobs at the going wage rate. The higher the proportion employed, the better are their labor market opportunities relative to other things they could do, and vice versa.

- **Employment rates for males with 9–11 and 12 years of schooling generally declined over the past two decades.**

Employment rate of 25- to 34-year-olds, by sex and years of schooling completed: 1971–1991

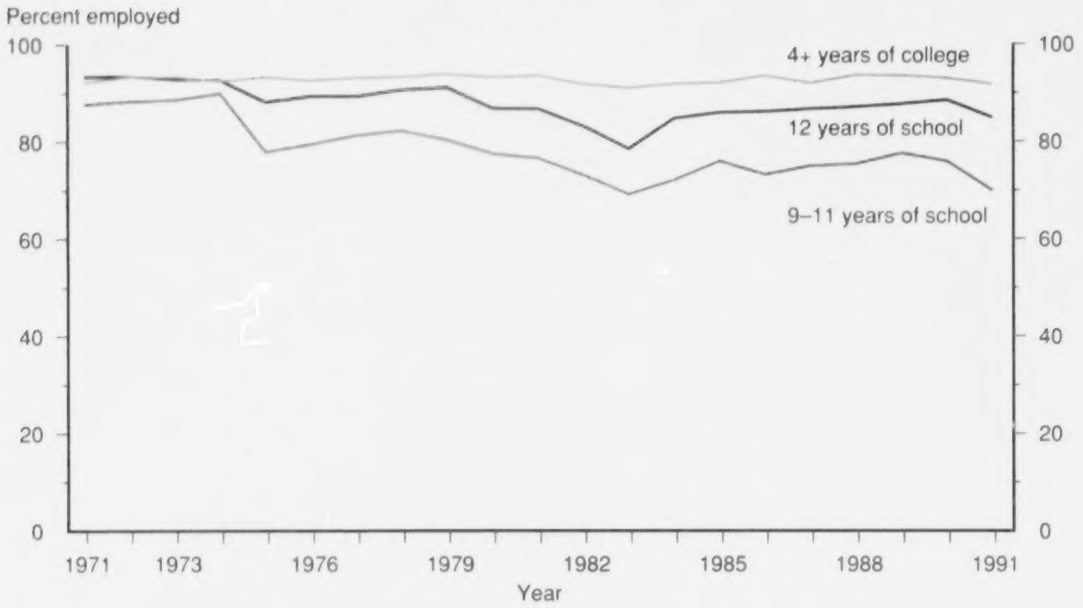
	Male				Female			
Year	9-11 years of school	12 years of school	1-3 years of college	4 or more years of college	9-11 years of school	12 years of school	1-3 years of college	4 or more years of college
					Percent			
1971	87.9	93.6	89.9	92.5	35.2	43.1	44.9	56.9
1972	88.5	93.7	90.4	93.6	36.1	44.9	47.4	59.8
1973	88.8	93.1	88.5	93.5	38.4	45.7	51.0	62.6
1974	90.2	93.0	90.0	92.7	39.8	47.6	54.2	66.6
1975	78.1	88.4	87.6	93.5	34.5	48.0	53.6	66.4
1976	79.6	89.6	89.0	92.8	39.5	49.8	56.5	68.8
1977	81.5	89.5	89.1	93.3	41.0	53.0	58.0	69.5
1978	82.4	90.8	91.2	93.5	42.4	55.9	63.3	72.1
1979	80.5	91.3	90.9	94.1	43.2	58.0	64.2	74.0
1980	77.7	87.0	88.5	93.4	45.6	59.5	66.3	75.5
1981	76.7	86.9	88.5	93.7	42.7	61.3	67.6	76.4
1982	73.2	83.3	85.2	91.9	39.7	59.6	68.2	77.7
1983	69.3	78.6	83.8	91.1	37.1	58.8	68.3	79.2
1984	72.2	84.8	87.9	91.9	41.5	61.0	69.5	80.4
1985	76.0	86.1	89.7	92.2	40.3	63.9	71.0	80.6
1986	73.3	86.2	89.0	93.7	44.1	63.8	70.6	80.3
1987	75.0	86.8	89.0	92.1	44.0	65.6	72.2	81.4
1988	75.5	87.2	89.8	93.7	46.9	66.8	74.8	81.2
1989	77.6	87.8	91.1	93.7	43.0	66.9	74.0	82.1
1990	75.9	88.6	89.7	93.1	44.3	67.5	74.5	83.2
1991	69.9	84.9	88.6	91.8	42.2	67.0	73.5	82.6

NOTE: The employment rate is the percentage of the population employed. See supplemental note: EMP for a comparison of the employment rate, presented in this table, to other labor force statistics.

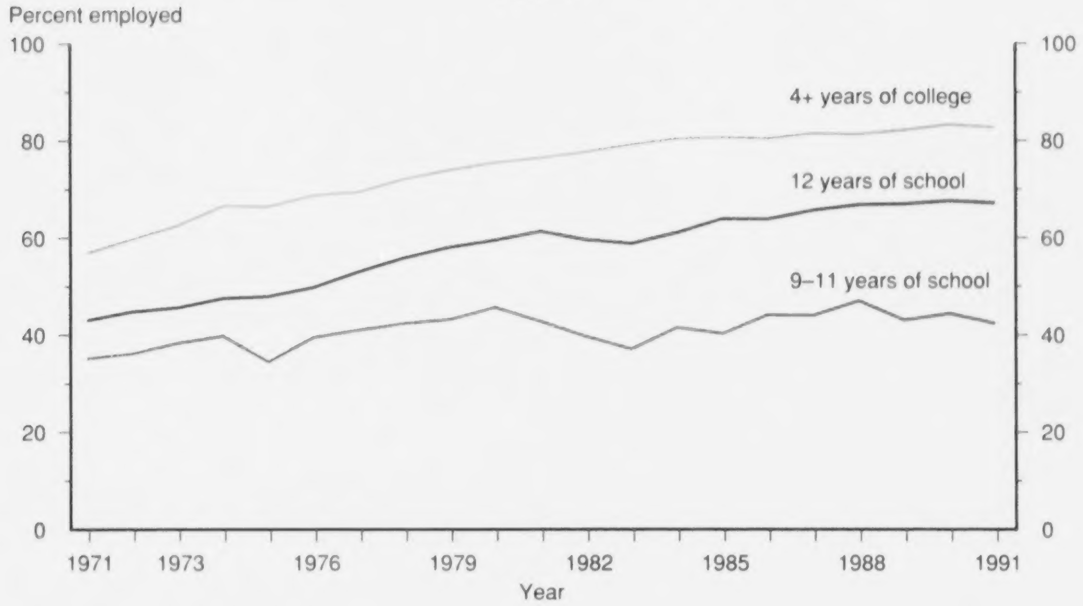
SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Percentage of population 25–34 years old who were employed: 1971–1991

Male



Female



SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Annual earnings of young adults

- **In recent years (1986–1990), the earnings disadvantage of not finishing high school was about 27 percent for white and black males 25–34 years old. For white and black females, the disadvantage was larger—39 and 42 percent, respectively.**
- **In the late 1980s, the earnings advantage of college graduates was, on average, 43 and 53 percent for white and black males, respectively. For white and black females, it was even larger—81 and 99 percent, respectively.**
- **The earnings advantage of completing college increased between 1974 and 1990 for both white males and females and for black males and females.**
- **Only for white males and females has the earnings disadvantage of not finishing high school increased over the last two decades.**

Wages and salaries are influenced by many factors, including the employer's perception of the productivity and the availability of workers with different levels of education. They are also affected by economic conditions in the industries that typically employ workers with different levels of education. Annual earnings are influenced by the number of weeks worked in a year and the usual hours worked each week. The ratio of annual earnings of high school dropouts or college graduates to those of high school graduates is affected by all these factors; it is a measure of the earnings disadvantage of not finishing high school and the advantage of completing college.

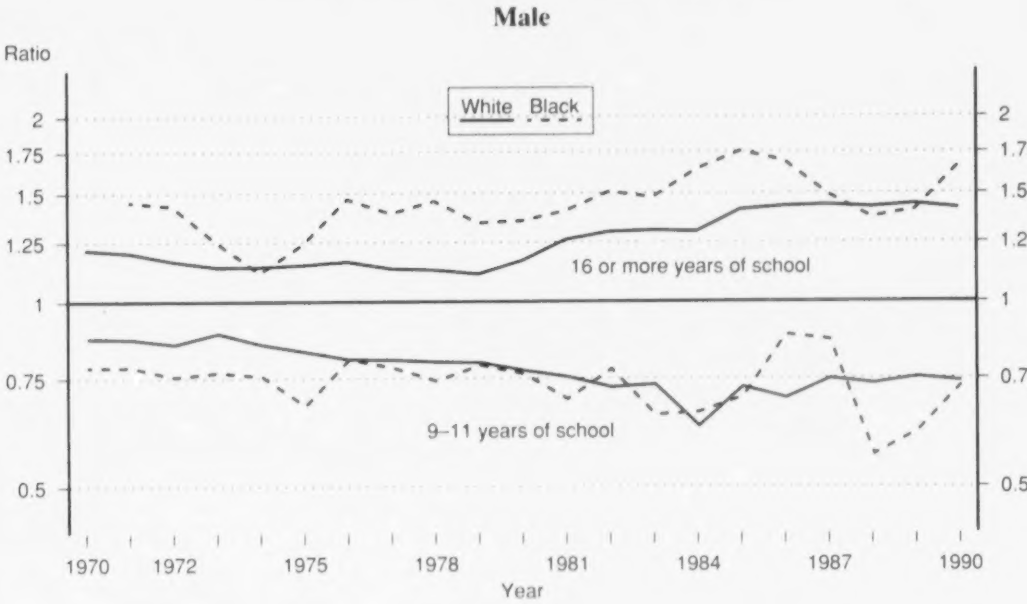
Ratio of median annual earnings of wage and salary workers 25 to 34 years old with 9-11 and 16 or more years of school to those with 12 years of school, by sex and race/ethnicity: 1970–1990

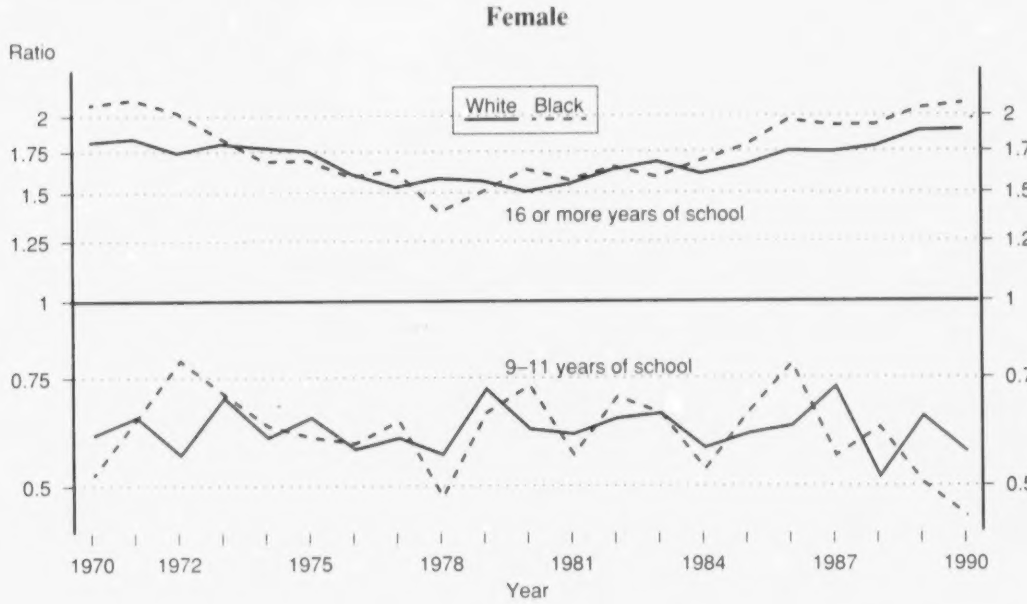
	9-11 years of school				16 or more years of school			
	Male		Female		Male		Female	
Year	White	Black	White	Black	White	Black	White	Black
1970	0.87	0.78	0.60	0.52	1.21	(*)	1.81	2.08
1971	0.86	0.78	0.64	0.64	1.20	1.45	1.84	2.13
1972	0.85	0.75	0.56	0.79	1.16	1.43	1.74	2.03
1973	0.88	0.76	0.69	0.70	1.14	1.25	1.80	1.84
1974	0.85	0.75	0.60	0.62	1.14	1.11	1.77	1.69
1975	0.82	0.67	0.64	0.60	1.15	1.24	1.75	1.69
1976	0.80	0.80	0.57	0.58	1.16	1.47	1.61	1.59
1977	0.80	0.77	0.59	0.63	1.13	1.39	1.53	1.63
1978	0.79	0.74	0.56	0.48	1.13	1.46	1.58	1.39
1979	0.79	0.78	0.71	0.65	1.11	1.34	1.57	1.50
1980	0.77	0.76	0.61	0.72	1.16	1.35	1.50	1.64
1981	0.75	0.69	0.60	0.56	1.26	1.40	1.55	1.57
1982	0.72	0.77	0.64	0.69	1.30	1.51	1.63	1.65
1983	0.73	0.65	0.65	0.65	1.30	1.48	1.68	1.59
1984	0.62	0.65	0.57	0.53	1.30	1.64	1.61	1.69
1985	0.72	0.69	0.60	0.65	1.41	1.75	1.66	1.78
1986	0.69	0.87	0.62	0.78	1.43	1.69	1.75	1.96
1987	0.74	0.86	0.72	0.55	1.43	1.49	1.74	1.92
1988	0.73	0.56	0.51	0.62	1.42	1.37	1.78	1.93
1989	0.74	0.61	0.64	0.50	1.44	1.41	1.89	2.05
1990	0.73	0.72	0.56	0.44	1.42	1.66	1.89	2.09

NOTE: The ratio is most usefully compared to 1.0. For example, the ratio of 1.42 in 1990 for white males with 16 or more years of school means that they earned 42 percent more than white males with 12 years of school. The ratio of 0.72 in 1990 for black males with 9–11 years of school means that they earned 28 percent less than black males with 12 years of school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Ratio of median annual earnings of wage and salary workers 25 to 34 years old with 9–11 and 16 or more years of school to those with 12 years of school, by sex and race/ethnicity: 1970–1990





NOTE: One on the scale represents earnings equal to those with 12 years of school; 2 represents double their earnings; .5 represents half their earnings. The scale on the graph makes the distance between 1 and 2, or doubling, the same as between 1 and .5 or halving.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

Voting behavior, by educational attainment

- **There is a strong positive relationship between voting and educational attainment. As educational attainment increases, so does voting participation.**
- **Within the population aged 25–44, in 1990, college graduates were 67 percent more likely and high school dropouts were 52 percent less likely to vote than high school graduates.***
- **Differences in voting behavior, by education, have widened over time among 25– to 44-year-olds.**
- **Voting rates in Presidential elections dropped between 1964 and 1988 for all educational attainment groups in the 25– to 44-year-old population, but the declines were smaller for the better educated groups.**

Education plays a vital role in preparing individuals for participation in the political, economic, and social lives of their communities. One indicator of education's impact in this area is the voting rate of groups with different amounts of education.

Voting rates and ratios of voting rates for the population 25 to 44 years old, by type of election and educational attainment: Selected years 1964–1990

Type of election and year	1–3 years high school	4 years high school	1–3 years college	4 or more years college
		Voting rates		
Congressional elections				
1974	24.7	41.9	49.7	59.3
1982	19.2	35.6	46.7	56.8
1990	17.8	34.4	47.9	57.4
Presidential elections				
1964	60.5	75.5	82.9	86.2
1976	38.5	57.8	67.4	78.5
1988	26.3	47.4	61.7	75.0
		Ratio of voting rates to that of high school graduates*		
Congressional elections				
1974	0.59	1.00	1.19	1.41
1982	0.54	1.00	1.31	1.59
1990	0.52	1.00	1.39	1.67
Presidential elections				
1964	0.80	1.00	1.10	1.14
1976	0.67	1.00	1.17	1.36
1988	0.56	1.00	1.30	1.58

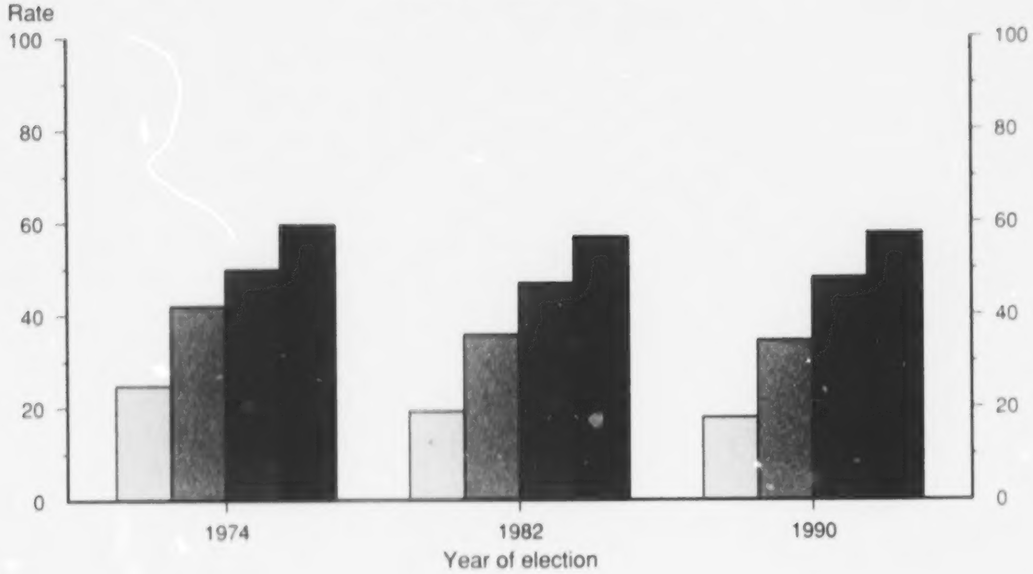
* College graduates are defined here as those completing 4 or more years of college and high school graduates as those completing 4 years of high school.

NOTE: To minimize the impact of age and immigration on voting trends, this indicator is confined to individuals aged 25-44 who completed at least one year of high school. The voting rate is calculated as the number of voters divided by the total number of individuals in the age group. The total group includes non-U.S. as well as U.S. citizens.

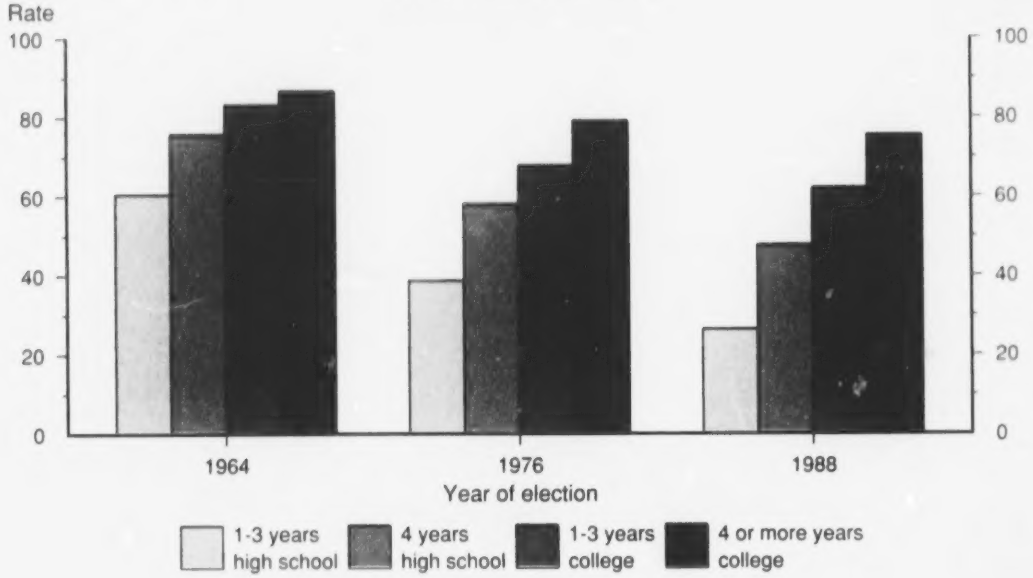
SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, "Voting and Registration in the Election of November .....," Series P-20, Nos. 143, 293, 322, 383, 440, 453.

Voting rates for the population 25 to 44 years old, by type of election and educational attainment: Selected years 1964–90

Congressional elections



Presidential elections



SOURCE: U.S. Department of Commerce, Bureau of the Census, **Current Population Reports**, "Voting and Registration in the Election of November ...," Series P-20, Nos. 143, 293, 322, 383, 440, 453.

Size, Growth, and Output of Educational Institutions

The education system grows and contracts largely as a result of demographic changes in the population. However, it also changes in response to changing conditions in the society and economy. In turn, changes in the growth of the system influence major support industries, future entries to the labor force, and future economic activity. The indicators in this section of the report provide some evidence of changes in the size of the education system.

Enrollment

The education system in the United States is very large. In 1990, about 60 million people in the United States, almost 1 in 4, were enrolled in elementary and secondary schools, colleges, and universities. They include about 34 million students in kindergarten through grade 8, 12 million in grades 9 through 12, 5 million in 2-year colleges, and 9 million in 4-year colleges and universities (*Indicator 34* and Table 35-1).

Most students are enrolled in public educational institutions but a sizable fraction are enrolled in private institutions. The percentage of students enrolled in private schools is high for nursery school children (65 percent), and it falls for older children (12 percent in grades K through 8, and 9 percent in grades 9 through 12, *Indicators 33, 34*). In postsecondary education, the split between public and private institutions depends strongly on the type of institution—only 5 percent of enrollment at 2-year colleges but 32 percent of enrollment at 4-year colleges and universities is in private institutions (*Indicator 35*). Institutions with less-than-2-year programs are predominately private and for-profit.[1]

The length of time spent in school has changed substantially in kindergarten and in higher education. Full-day kindergartens were much more prevalent in 1990 (44 percent) than they were in 1973 (20 percent, *Indicator 33*). Part-time undergraduates in colleges and universities were more prevalent in recent years (an average of 27 percent between 1987 and 1990) than they were two decades earlier (an average of 17 percent between 1967 and 1970) (Table 46-5). However, almost all of increase in the percentage of undergraduates attending part time occurred between 1967 and 1977 and has remained fairly stable since 1977.

Growth of Enrollment

After the end of World War II, the number of births per year reached a peak of 4.3 million in 1957. The baby boom period between 1946 and 1964 was followed by a period of declining births which reached a low of 3.1 million in 1972. Since then the number of births have remained low but rebounded reaching 4 million in 1989.[2] These trends are reflected, with lags, in the growth and decline of enrollments. Between 1970 and 1984 total public school enrollment fell about 15 percent; from 1984 to 1990, it rose about 5 percent (*Indicator 34*).

Changes in the number of births are first felt in the elementary schools, and later in secondary schools. Enrollment in public schools in kindergarten through grade 8 declined throughout the 1970s, reaching a low point in 1984, and since has been rising (*Indicator 34*). Enrollment in public schools in grades 9 through 12 increased in the early 1970s reaching a peak in 1976, and since has been declining—it is projected to begin increasing again in the 1991–1992 school year.

The level of enrollment in higher education is less tied to the number of births than in elementary and secondary schools where enrollment is nearly universal. Total enrollment in higher education rose throughout the 1970s as would be expected as the number of high school graduates was rising. In the first half of the 1980s it remained stable with a small drop in 1984. Enrollment has risen each year since 1985 despite a decline in the number of high school graduates aged 20 to 24 (*Indicator 35*). Two factors account for the continued growth in enrollment: increasing enrollment rates among 16- to 24-year-olds (*Indicator 8*); and the increasing number of older students due to the aging of the baby boom cohorts.

The distribution of enrollment between 2-year and 4-year colleges and universities remained stable during the 1980s. Enrollment in both types of institutions increased about 10 percent between 1981 and 1990 (*Indicator 35*).

Diplomas and Degrees

Whereas enrollment is an indication of the size of the educational system, completions are one indication of what and how much the education system is producing. A diploma or degree awarded to an individual is an indication that the education system has helped make more knowledge and skill available in the economy and society. Public and private high schools and GED programs awarded 3 million diplomas and equivalency certificates in 1990 (Table 36-1).

At the undergraduate level, the two most common credentials are the associate's and bachelor's degrees. The number of associate's degrees, many of which are in occupationally specific fields, increased moderately during the 1980s after a period of rapid growth during the 1970s. In 1990, about 455,000 associate's degrees were awarded—14 percent more than in 1980. The increase was about the same as the increase in total enrollment in higher education over the period. The number of bachelor's degrees awarded also grew throughout the 1980s. In 1990, 1.05 million bachelor's degrees were awarded—13 percent more than in 1980 (Table 36-1).

At the graduate level, master's degree awards were the most numerous. In 1990, there were 324,000 awarded, in contrast to 71,000 first professional degrees and 38,000 doctor's degrees. The distribution of type of degrees changed somewhat during the last half of the 1980s. Following years of negative or little growth, the number of doctor's degrees rose 16 percent between 1985 and 1990, and conversely after a long period of growth, the number of first-professional degrees fell between 1985 and 1988 (Table 36-1). Similar to associate's and bachelor's degrees, the number of master's degrees increased 9 percent between 1980 and 1987, but all the increase was since 1987. There was a slight decline before then.

NOTES:

1. U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study, 1990 and 1987.

2. U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States, 1991*, Table 82.

Selected characteristics of preprimary enrollment

- **In 1990, private schools enrolled almost two-thirds of all pre-K students. However, private schools enrolled only about 14 percent of all kindergarten students.**
- **The percentage of children in kindergarten who attend full day has more than doubled since 1973. The percentage of children in pre-K who attend full day has remained more stable.**
- **Minority enrollment as a percentage of total pre-K enrollment was stable between 1973 and 1990.**
- **At the kindergarten level, minority enrollment as a percentage of total enrollment increased by 8 percentage points during the same period, due primarily to increases for Hispanics.**

Because enrollment at the preprimary level is usually optional, different enrollment patterns emerge from those at the elementary-secondary level. Additionally, students in preprimary education may enroll either on a full- or part-day basis. These various enrollment distributions can suggest the growth or decline of the different sectors of preprimary education.

Selected characteristics of preprimary students, by level: 1973–1990

Year	Pre-K					Kindergarten				
	Percent private	Percent full day	Percent minority			Percent private	Percent full day	Percent minority		
			Total*	Black	Hispanic			Total*	Black	Hispanic
1973	69.8	29.2	20.6	15.5	5.1	16.0	19.6	19.2	13.7	5.6
1974	73.7	33.2	19.0	13.8	5.3	16.2	19.4	21.0	14.1	6.9
1975	67.2	33.9	20.6	15.7	4.9	16.0	22.0	20.6	13.7	6.9
1976	68.8	30.3	19.3	14.8	4.5	15.1	22.9	22.8	15.3	7.5
1977	65.3	32.9	19.9	15.3	4.6	16.5	27.7	22.3	15.4	6.9
1978	67.8	34.6	21.5	16.7	4.8	16.6	27.5	22.6	14.9	7.7
1979	66.0	33.5	14.9	14.9	—	14.3	29.7	16.4	16.4	—
1980	68.1	34.3	21.9	14.5	7.3	15.3	30.1	23.7	15.4	8.3
1981	67.8	29.3	20.2	13.8	6.4	17.2	30.5	24.6	15.0	9.7
1982	66.1	29.1	17.9	14.0	3.9	16.8	32.4	25.3	15.3	10.0
1983	65.6	29.5	18.4	13.9	4.6	19.5	32.8	24.0	14.1	10.0
1984	67.7	33.9	19.4	14.4	5.0	15.2	36.2	24.5	16.0	8.4
1985	65.7	34.1	20.1	13.3	6.7	15.6	38.3	25.7	16.2	9.5
1986	67.3	35.2	19.3	12.3	7.0	16.0	39.7	27.7	15.9	11.7
1987	67.2	33.4	19.4	10.7	8.7	14.8	37.1	28.0	17.1	10.9
1988	67.1	31.3	16.6	10.8	5.7	13.6	38.0	26.5	14.8	11.6
1989	66.2	33.8	18.7	12.6	6.0	14.9	40.1	25.7	15.7	10.1
1990	64.5	34.2	20.3	12.9	7.4	14.4	43.6	28.3	16.5	11.7

— Not available.

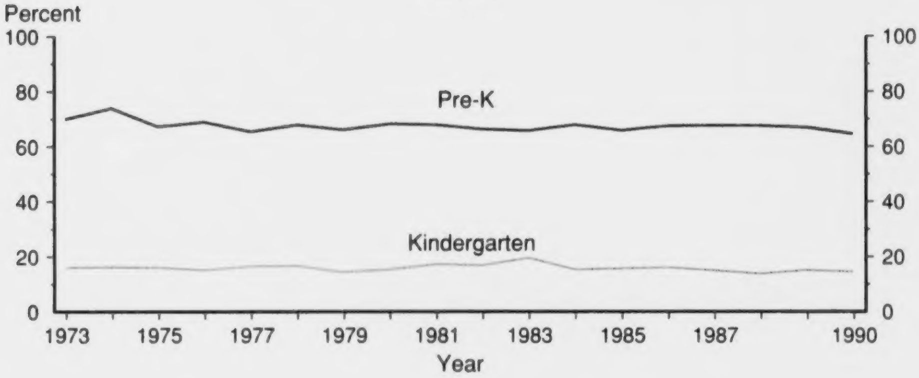
* Includes only blacks and Hispanics.

NOTE: Pre-K and kindergarten enrollment does not include those below 3 years of age. Some data have been revised from previously published figures.

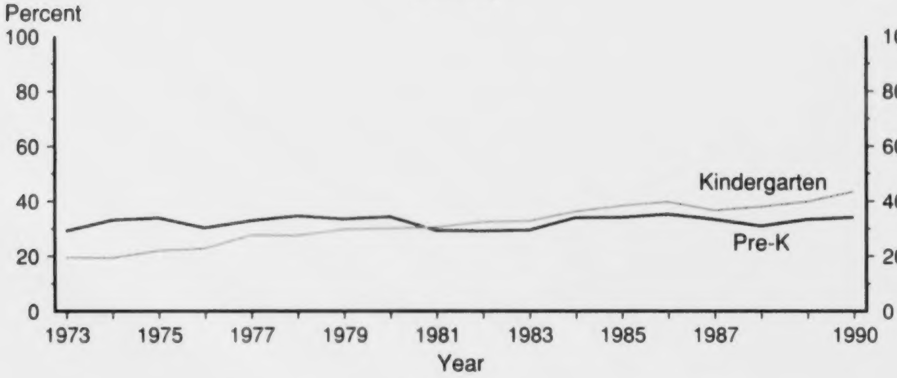
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Percentage of preprimary students who attend a private school, attend full day, and are minority, by level: 1973–1990

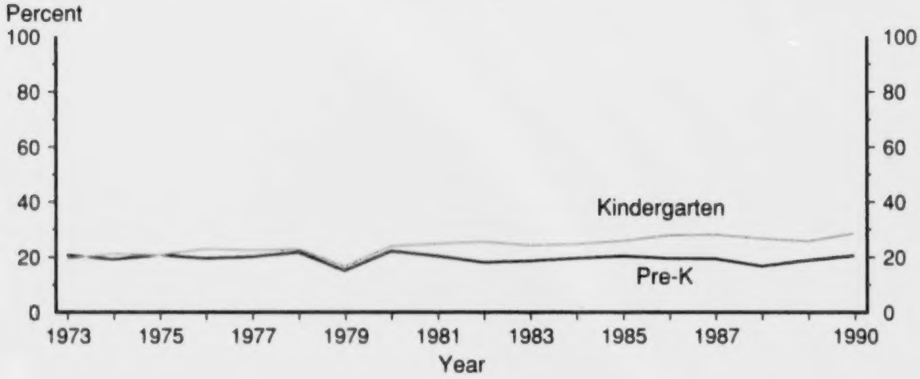
Private



Full day



Minority



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Elementary and secondary school enrollments, by control

- **From 1970 to 1984, total public school enrollment fell about 15 percent, but rose about 5 percent from 1984 to 1990.**
- **Total private school enrollment rose by over 6 percent from 1970 to 1984, but fell by about 9 percent from 1984 to 1990.**
- **Total public school enrollment is projected to rise from 41.6 million to 47 million from 1991 to 2002, an increase of 13 percent. During the same time period, total private school enrollment is expected to rise from 5.3 million to about 5.9 million, also an increase of 13 percent.**

> *In the United States, the tradition of public education has been complemented by a history of private school alternatives. Enrollment figures from both types of schools are essential for educators and policymakers analyzing current enrollment patterns and possible trends in future enrollment.*

- **From 1991 to 2002, enrollment at the secondary level for both the public and private schools is projected to increase at about twice the K–8 rate of growth.**

Elementary and secondary school enrollment, by control of school and level, with projections: 1970-2002

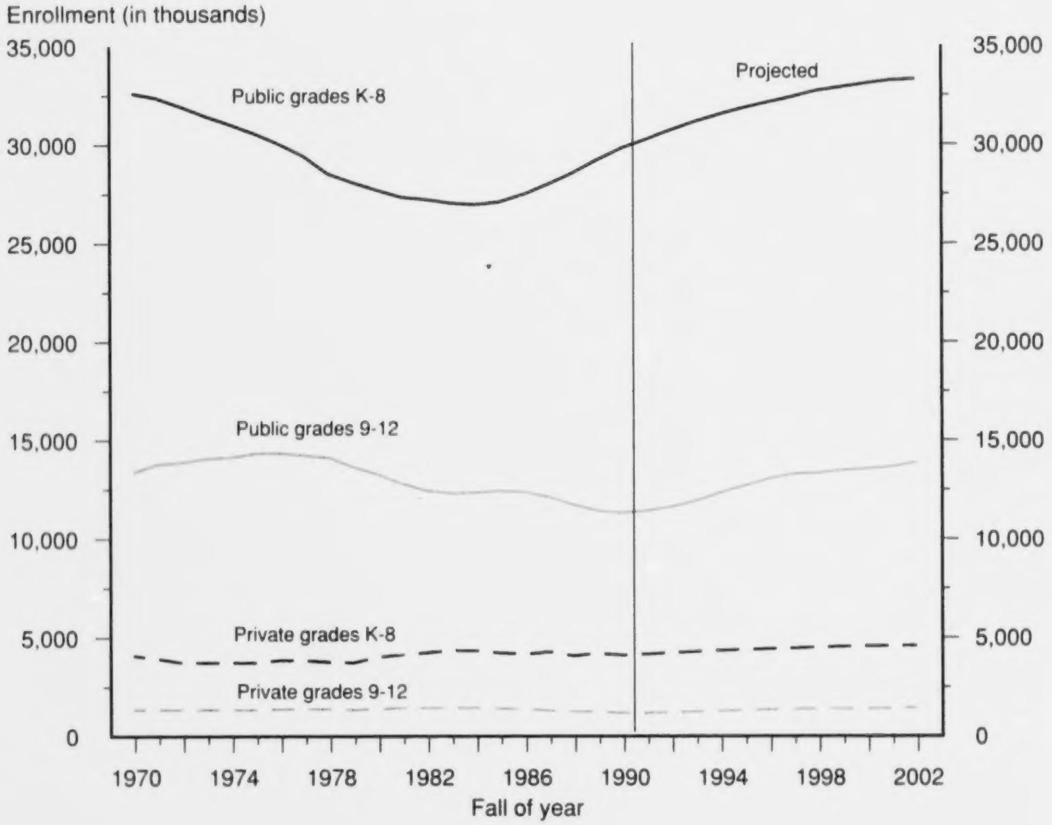
Fall of year/ period	Public schools			Private schools		
	Grades K–12[1]	Grades K–8[1]	Grades 9–12	Grades K–12[1]	Grades K–8[1]	Grades 9–12
			(In thousands)			
1970	45,894	32,558	13,336	5,363	4,052	1,311
1984	39,208	26,905	12,304	[2]5,700	[2]4,300	[2]1,400
1990	41,026	29,742	11,284	[2]5,195	[2]4,066	[2]1,129
	Projected			Projected		
1991	41,575	30,186	11,389	5,266	4,127	1,140
2002	47,068	33,245	13,823	5,928	4,545	1,383
	Percentage change			Percentage change		
1970–84	-14.6	-17.4	-7.7	[2]6.3	[2]6.1	[2]6.8
1984–90[2]	4.6	10.5	-8.3	-8.9	-5.4	-19.4
	Projected percentage change			Projected percentage change		
1991–2002	13.2	10.1	21.4	12.6	10.1	21.3

[1] Includes most kindergarten and some nursery school.

[2] Estimated.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts*, forthcoming, Common Core of Data, various years, *Digest of Education Statistics 1991*, table 3 *Projections of Education Statistics to 2002*, 1991, table 1.

Elementary and secondary enrollment, by level and control: 1970–2002



SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts*, forthcoming, Common Core of Data, various years, *Digest of Education Statistics 1991*, table 3 *Projections of Education Statistics to 2002*, 1991, table 1.

College and university enrollment, by type and control of institution

- **Total enrollment in higher education institutions has risen each year since 1985 despite a decline in the number of high school graduates aged 20-24.**

- **Following substantial growth in the 1970s, total enrollment in public 2-year institutions fell during the mid-1980s before turning upward again.**

- **Among 4-year institutions, total enrollment increased more at public than at private institutions during the last half of the 1980s.**

Colleges and universities offering 2- and 4-year programs under public and private control address somewhat different student needs. Fluctuations in enrollments may indicate, among other things, changes in student interest in the various kinds of services offered, changes in the cost of attendance, and changes in the availability of student financial aid.

- **Public 2-year institutions increased their share of total enrollment during the 1970s, mainly at the expense of public 4-year institutions. Institutional shares remained stable during the 1980s.**

- **The distribution of total enrollment between public and private institutions changed little between 1972 and 1990. Public institutions continue to enroll over three-fourths of students.**

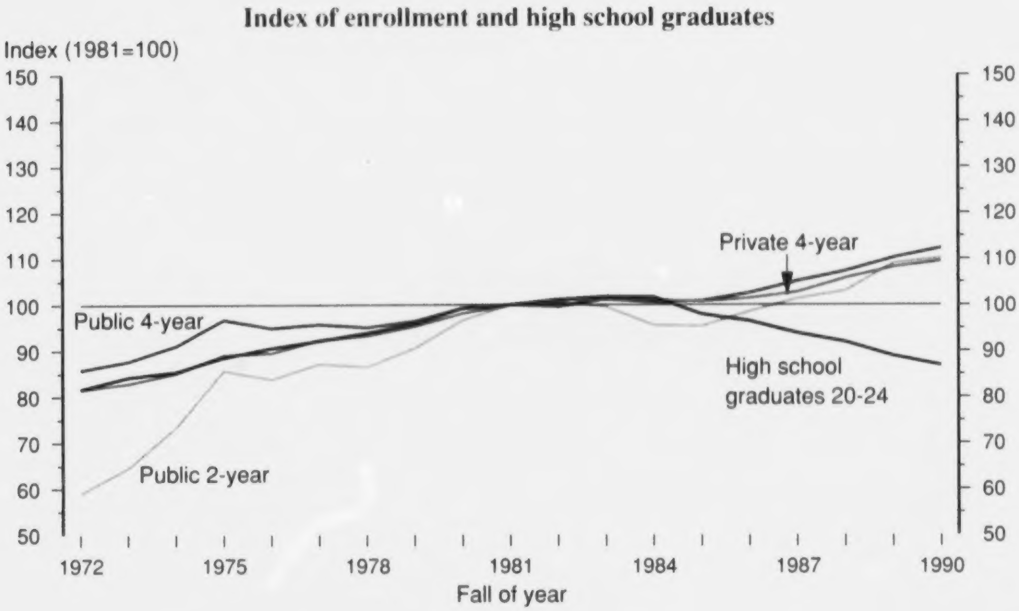
Total enrollment in higher education, by type and control of institution : Selected years 1972–1990

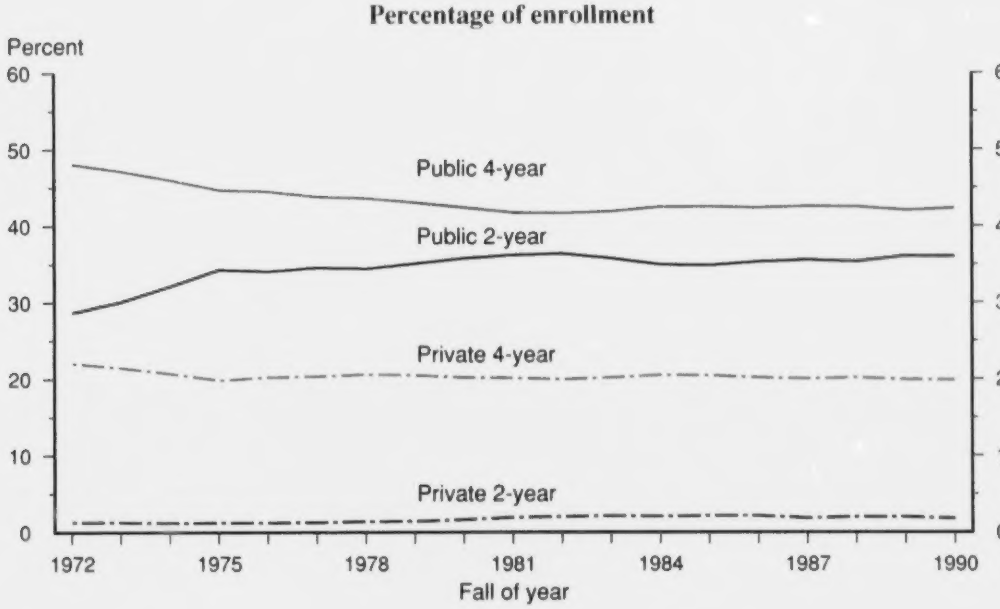
	Index of enrollment (1981=100)				Index of high school graduates aged 20-24 (1981=100)	Percent of enrollment		
Fall of year	All institutions	Public, 4-year	Public, 2-year	Private, 4-year		Public, 4-year	Public, 2-year	Private, 4-year
1972	74.5	85.7	58.9	81.5	81.6	48.1	28.7	22.0
1975	90.4	96.7	85.6	89.1	88.5	44.7	34.3	19.8
1978	91.0	95.1	86.5	93.2	93.9	43.6	34.4	20.6
1981	100.0	100.0	100.0	100.0	100.0	41.8	36.2	20.1
1984	99.0	100.6	95.5	101.0	101.6	42.5	35.0	20.5
1987	103.2	105.1	101.3	102.8	93.8	42.5	35.6	20.0
1990	110.8	112.3	110.2	109.5	86.8	42.3	36.0	19.9

NOTE: Data for 2-year private institutions are not shown separately, but are included in the total.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years. U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Total enrollment in higher education, by type and control of institution, and high school graduates aged 20–24: Fall 1972–fall 1990





SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years. U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Degrees conferred, by level

- **The number of bachelor's degrees grew throughout the 1980s despite a decline in the number of those completing high school.**
- **The number of master's degrees fell between 1977 and 1984 but increased each year after that, reaching its highest level of the 1971–90 period by 1990.**
- **Following years of negative or little growth, the number of doctor's degrees rose 16 percent between 1985 and 1990.**
- **The number of first-professional degrees fell during the last half of the 1980s after a long period of growth.**

Trends in the number of degrees conferred, by degree levels provide clues to changes in the productivity of the nation's higher education system, the allocation of resources within the system, and the level of trained individuals within the society. Viewed in relation to the eligible population (e.g., the number of high school graduates), the data show whether degrees have lagged behind or exceeded growth in that population.

Index of number of degrees conferred and number of high school completions (1981=100): Academic years ending 1971–1990

Academic year ending	Associate's degrees	Bachelor's degrees	Master's degrees	Doctor's degrees	First-professional degrees[1]	High school completions[2]
1971	60.7	89.8	77.9	97.4	52.7	--
1972	70.2	94.9	85.1	101.2	60.3	--
1973	75.9	98.6	89.1	105.5	69.5	--
1974	82.6	101.1	93.7	102.6	74.8	96.0
1975	86.5	98.7	98.9	103.4	77.7	99.0
1976	94.0	99.0	105.4	103.4	87.1	99.2
1977	97.6	98.3	107.2	100.8	89.4	99.4
1978	99.0	98.5	105.4	97.5	92.5	100.0
1979	96.7	98.5	101.8	99.3	95.7	101.0
1980	96.3	99.4	100.8	99.0	97.5	100.4
1981	100.0	100.0	100.0	100.0	100.0	100.0
1982	104.4	101.9	99.9	99.2	100.1	99.2
1983	109.6	103.7	98.0	99.4	101.6	95.6
1984	108.7	104.2	96.1	100.8	103.4	91.0
1985	109.2	104.7	96.8	100.0	104.3	88.1
1986	107.1	105.6	97.6	102.1	102.7	87.5
1987	105.0	106.0	97.9	103.5	101.1	89.4
1988	104.6	106.2	101.0	105.7	97.9	90.7
1989	104.9	108.9	105.0	108.4	98.5	87.8
1990[3]	109.2	112.2	109.5	116.0	98.6	85.5

[1] Includes degrees in law, medicine, denistry, and theology. See glossary for a definition and complete list of degrees included.

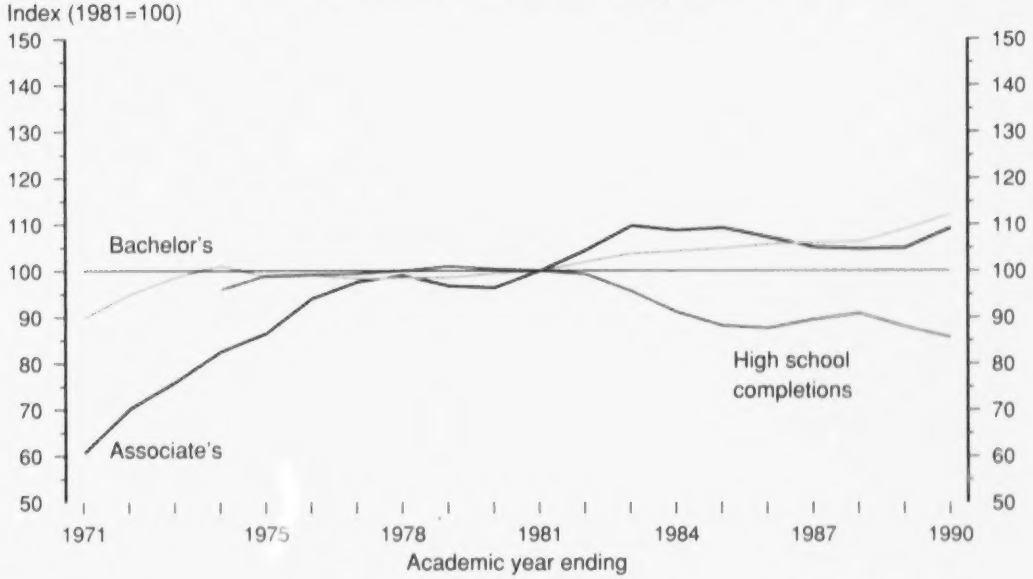
[2] High school completions include high school diplomas and GED credentials.

[3] Preliminary.

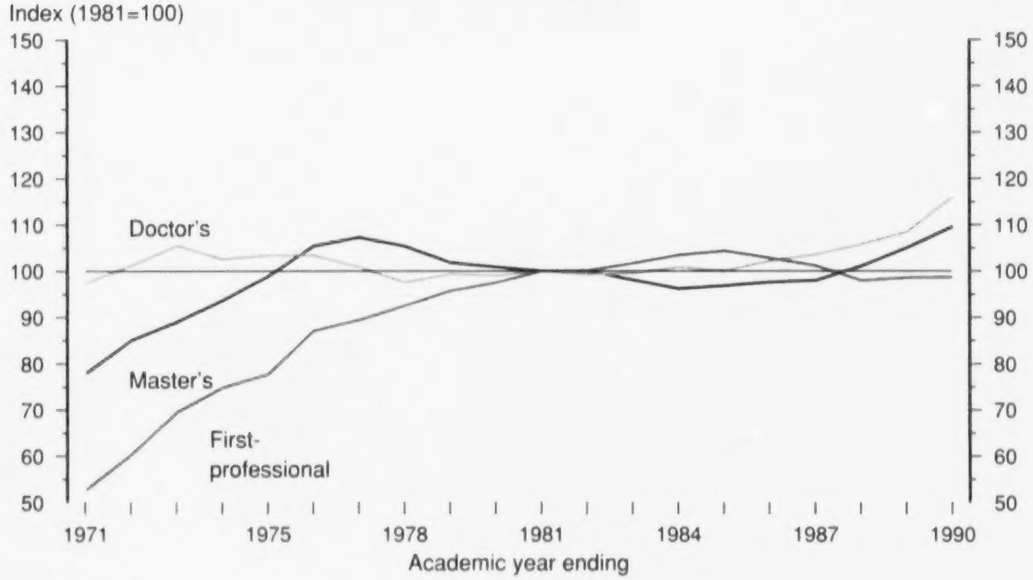
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred and Common Core of Data. American Council on Education, annual GED surveys.

Index of number of degrees conferred, by degree level, and number of high school completions (1981=100): Academic years ending 1971–1990

Associate's and bachelor's degrees



Advanced degrees



NOTE: High school completions include diplomas and GED credentials.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred and Common Core of Data. American Council on Education, annual GED surveys.

Climate, Classrooms, and Diversity of Educational Institutions

The quality of schools is not only reflected in the cognitive achievement of students, but in the learning environment schools provide. The features of schools and students that bear on the learning environment are too numerous to be adequately covered by a few indicators and national data on many aspects of interest about this environment are lacking. Therefore, the indicators in this section must only be viewed as a small sampling of the indicators necessary to describe fully the learning environment of schools.

Diversity

The demographic characteristics of American families necessarily describe the characteristics of elementary and secondary school students and the special needs they bring with them to school. One out of five children lives in a family with income below the poverty line (*Indicator 39*). These children are likely to be concentrated in some schools and largely absent in others. Forty-four percent of black children and 38 percent of Hispanic children live in poverty, and about half of the children in public schools in the central cities of metropolitan areas are black or Hispanic (*Indicator 37*). Public schools in the central cities of metropolitan areas tend to have higher concentrations of children living in poverty.

Racial and ethnic diversity in the schools also brings cultural diversity. Hispanic and Asian children are more likely to hear and speak a language other than English at home. In 1989, black children ranged from 8 percent of students in private schools to 33 percent of children in public schools in the central cities. Hispanic children ranged from 4 percent of children in public schools in non-metropolitan areas to 20 percent of children in public schools in the central cities (*Indicator 37*).

Higher education institutions are less diverse than public elementary and secondary schools, because minorities, with the exception of Asians, are less likely than whites to enroll in higher education. Overall, in 1988, 15 percent of public school children were black, 10 percent were Hispanic, and 3 percent were Asian (Table 37-1). In higher education, 9, 6, and 4 percent of students were black, Hispanic, and Asian, respectively (*Indicator 38*). Within higher education, compared to other students Hispanics were more likely to attend 2-year colleges—they made up 8 percent of students in 2-year colleges and 4 percent of students in 4-year colleges and universities. Part of this is attributable to the fact that large numbers of Hispanics live in states like California, with an extensive 2-year college system. Since 2-year colleges are primarily publicly controlled, a larger fraction of students in public higher education institutions are Hispanic (6 percent) than in private higher education institutions (4 percent). Blacks are about the same percentage of public and of private college students, and of 2-year and of 4-year college students.

As the baby boom babies moved into their thirties and early forties and were followed by much smaller cohorts in their teens and twenties, the age distribution of college students has tilted toward older ages. The percentage of students 35 years old or over increased from 8 percent in 1976 to 13 percent in 1990. The percentage of undergraduate students 16–21 years old fell from 62 percent in 1976 to 53 percent over the same period (*Indicator 46*). Older students are more likely to attend part-time and attend 2-year institutions than younger students (*Indicator 46* and Table 46-1). However, the percentage of undergraduate students reporting they are attending part-time has remained fairly stable at 25 percent since 1977 (Table 46-4).

Classrooms

The size of a school can be a factor in the variety of services and special programs it can offer and on student participation, attendance, satisfaction, and achievement.* Elementary, rural, and private schools generally are smaller than secondary, urban, and public schools, respectively. For example, in the 1987–88 school year, 8 percent of public schools with a 4th grade enrolled 750 or more students versus 36 percent of those with a 12th grade; 11 percent of public schools with a 12th grade in rural areas enrolled 750 or more students versus 66 percent of those in urban areas and 65 percent of those in suburban areas; 50 percent of private schools with a 4th grade enrolled less than 150 students versus 11 percent of public schools (*Indicator 41*).

Schools are asked to provide educational services that go beyond the traditional academic subjects and to help ameliorate problems faced by students. These services include: teaching students whose first language is not English, teaching children with disabilities, teaching gifted and talented children, providing diagnostic and prescriptive services, and providing extended day programs for children whose parents work. Generally, public schools are more likely than private schools to provide special services. For example, 90 percent of public elementary schools (with 4th-grade students) had programs for the handicapped in contrast to 17 percent of private elementary schools; 72 percent of public elementary schools provided diagnostic services to uncover the learning problems of students and provided therapeutic or education programs to serve them in contrast to 42 percent of private elementary schools; and 29 percent of public secondary schools (with 12th-grade students) had programs to teach English as a second language in contrast to 13 percent of private secondary schools (*Indicator 40*). Public schools are generally larger than private schools and may be able to provide these services, more efficiently but public schools students are more diverse and may have greater need for the services.

There are differences in the services provided by public schools in different settings. Urban and suburban public elementary schools were more likely to have an extended day or before- or after-school day care programs than schools in small cities or rural communities. Urban public schools at all levels were more likely to offer bilingual education than schools outside urban areas (Table 40-1). These differences could be due to a variety of factors including differences in the students, workforce participation of parents, and differences in school finances and, possibly, size.

Climate

The learning climate both reflects and influences the behavior of students. Three indicators provide information on drug and alcohol use, crime in the schools, and working after school. The percentage of high school students reporting having used alcohol is high and has been so since 1975. In 1991, 54 percent of high school seniors reported having used alcohol in the last 30 days. The percentage reporting having used illegal drugs in the last 30 days is substantial (16 percent in 1991), but has declined sharply since 1979 when 39 percent reported doing so. The percentage reporting having ever used cocaine was 8 percent in 1991, down from 17 percent in 1981. Whites are about twice as likely as blacks to report having used cocaine (*Indicator 44*).

School safety is an issue which directly affects educators and students. In 1989, 17 percent of 12- to 19-year-old students in public schools reported seeing a teacher attacked or threatened with attack in their schools, compared to 5 percent in private schools. Also, 17 percent of students in public schools reported street gangs in their school, compared to 4 percent in private schools. Among racial/ethnic groups, most reported a similar percentage of occurrences of *most* types of criminal activity in their schools. However, whites were less likely than blacks, Hispanics, or Asian/Pacific Islanders to report the presence of gangs in their schools (*Indicator 43*).

Working during the school year could leave students with less time to concentrate on their studies or participate in extracurricular activities, or it may teach them valuable workplace skills. In October 1990, about one in three high school students had a job. However, only 12 percent worked 20 or more hours per week. Black high school students were less than half as likely as their white counterparts to work while still in school. Hispanics were more likely than blacks but less likely than whites to work. However, about the same percentage of Hispanics as whites worked 20 or more hours per week (*Indicator 45*).

NOTE:

* Fowler, Jr. W.J. and Walberg, H.J., "School Size, Characteristics, and Outcomes." *Educational Evaluation and Policy Analysis*, **4**, 57-65, 1991.

Racial and ethnic distribution of elementary and secondary students

- **Between 1970 and 1989, about one in three students in central city public schools has been black. In 1989, 10 percent of students in metropolitan public schools outside of central cities were black, up from 6 percent in 1970.**
- **In 1972, 1 in 10 students in central city public schools was Hispanic; in 1989, 2 in 10 were Hispanic.**
- **In 1988, 3.1 percent of students in public elementary/secondary schools were Asian, up from 1.2 percent in 1976 (supplemental table 37-1).**
- **Throughout the 1980s, black and Hispanic students have constituted a majority of public school students in central cities.**

Changes in the racial and ethnic composition of students create challenges for the schools. For example, increases in Hispanic and Asian students portend a greater degree of heterogeneity of language and culture in the schools. Also, as many minorities come from impoverished families, increases in the percentage of minority students may indicate a greater need to help these students take full advantage of educational opportunities.

Percentage of students in grades 1 to 12 who are black or Hispanic, by control of school and residence: 1970–1989

	Black				Hispanic				Black or Hispanic[1]			
	Public schools				Public schools				Public schools			
Year	Central cities	Other metropolitan	Nonmetropolitan	Private schools	Central cities	Other metropolitan	Nonmetropolitan	Private schools	Central cities	Other metropolitan	Nonmetropolitan	Private schools
1970	32.5	6.2	12.0	4.7	—	—	—	—	—	—	—	—
1971	34.4	6.5	11.6	4.6	—	—	—	—	—	—	—	—
1972	31.7	6.3	11.3	5.2	10.8	4.4	3.6	4.7	42.0	10.6	14.9	9.9
1973	32.1	5.8	11.0	5.7	10.2	4.4	3.7	5.0	41.8	10.1	14.6	10.6
1974	33.2	6.6	11.8	4.3	11.4	4.4	4.4	7.3	44.0	10.9	16.2	11.5
1975	33.0	7.0	11.8	5.0	12.0	5.1	4.1	5.9	44.5	12.0	15.9	10.9
1976	34.0	7.6	11.7	5.8	11.4	5.9	3.7	5.4	44.9	13.4	15.3	11.0
1977	35.5	7.1	12.6	6.2	11.8	5.6	2.9	6.9	47.0	12.6	15.5	13.1
1978	35.9	7.4	12.3	6.0	11.9	6.1	3.0	5.2	47.4	13.3	15.3	11.1
1979	35.8	8.8	10.9	7.5	14.0	5.3	3.5	5.5	49.5	14.1	14.4	13.0
1980[2]	—	—	—	—	—	—	—	—	—	—	—	—
1981	35.2	8.1	11.8	6.5	16.7	7.4	4.2	7.4	51.4	15.6	16.0	13.9
1982	34.0	8.6	11.9	6.6	17.7	7.0	4.3	7.3	51.0	15.5	16.1	13.9
1983	33.9	9.1	11.5	6.5	18.1	7.5	4.1	7.2	51.5	16.6	15.6	13.7
1984[2]	—	—	—	6.3	—	—	—	5.9	—	—	—	12.1
1985	36.0	9.5	12.7	5.6	21.5	8.6	4.2	6.1	56.7	18.1	16.8	11.5
1986	32.9	8.3	14.1	6.9	20.2	8.3	4.1	7.0	52.4	16.5	18.3	13.8
1987	32.9	8.8	12.8	7.4	19.6	9.0	3.9	7.0	51.7	17.5	16.7	14.3
1988	32.4	9.8	12.2	8.2	19.2	9.0	4.7	6.7	51.1	18.6	16.9	14.8
1989	32.8	10.0	11.5	7.7	20.2	10.2	4.0	6.7	51.8	20.0	15.3	14.1

— Not available.

[1] Because a small number of students (less than 1 percent) are both black and Hispanic, the "percent black or Hispanic" columns are slightly smaller than the sum of the "percent black" and "percent Hispanic" columns.

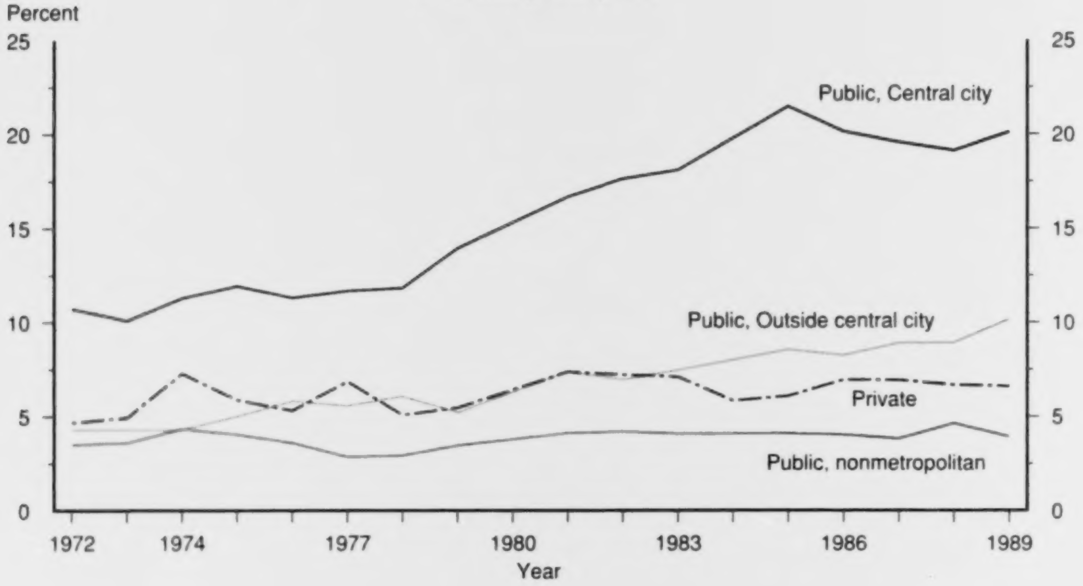
[2] Control not available in 1980. Residence not available in 1984.

NOTE: The definition of metropolitan areas in the U.S. was changed in 1985.

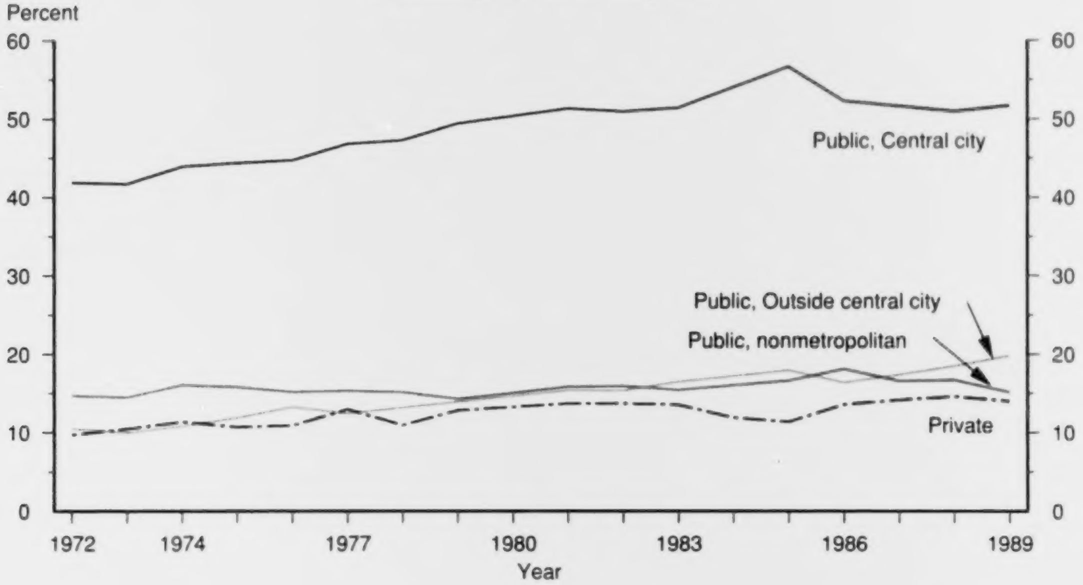
SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "School Enrollment ...." various years; October Current Population Surveys.

Race and ethnicity of students in grades 1 to 12, by residence and control of school: 1972–1989

Percentage Hispanic



Percentage black or Hispanic



SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-20, "School Enrollment ...," various years; October Current Population Surveys.

Racial and ethnic distribution of college students

- **Between 1976 and 1990, the college student body became somewhat more heterogeneous. Minority students increased from 15 to 19 percent and nonresident aliens from 2 to 3 percent of total enrollment.**
- **As a percentage of college students, Hispanics and Asians increased in the 1976–90 period, while American Indians remained the same.**
- **Despite a slight increase in black enrollment, the black share of total enrollment has fallen somewhat since the late 1970s.**
- **In 1990, blacks made up 9 percent, Hispanics 6 percent, Asians 4 percent, and American Indians 1 percent of enrolled students.**
- **Minority students make up a higher proportion of the student body at 2-year than at 4-year institutions and at public than at private institutions.**

Colleges and universities want diversity in their student body—variety in the backgrounds and interests of students enhances the learning environment. The racial/ethnic mix of college students is one aspect of the diversity of students. Changes in the racial/ethnic mix of college enrollment suggest changes in the needs, interests, and backgrounds of the student body.

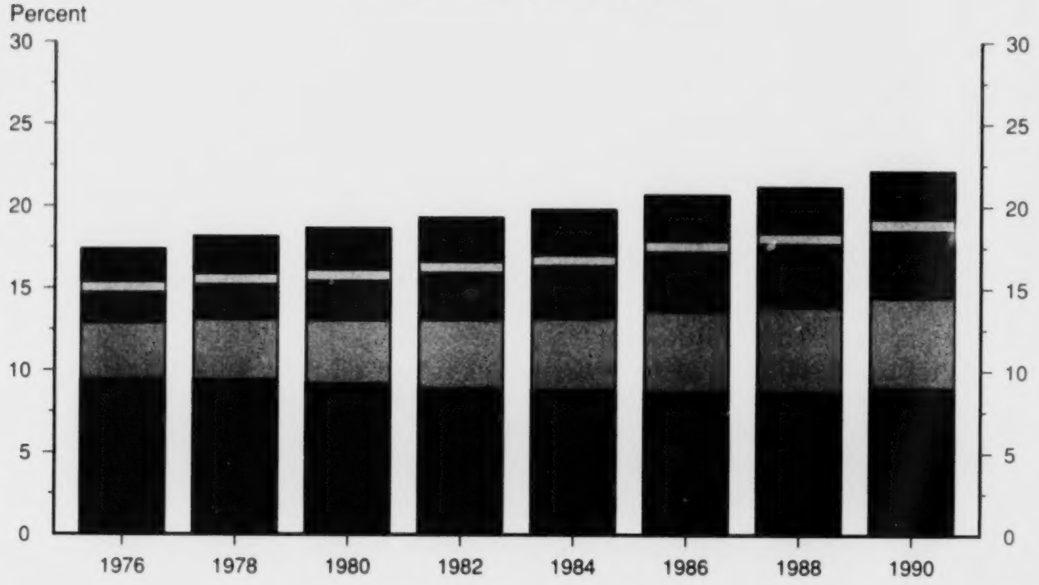
Percentage of total enrollment, by race/ethnicity: Falls 1976–1990

Fall of year and type of institution	White	Black	Hispanic	Asian	American Indian	Nonresident alien
			All institutions, by fall of year			
1976	82.6	9.4	3.5	1.8	0.7	2.0
1978	81.9	9.4	3.7	2.1	0.7	2.2
1980	81.4	9.2	3.9	2.4	0.7	2.5
1982	80.7	8.9	4.2	2.8	0.7	2.7
1984	80.2	8.8	4.4	3.2	0.7	2.7
1986	79.3	8.7	4.9	3.6	0.7	2.8
1988	78.8	8.7	5.2	3.8	0.7	2.8
1990	77.9	8.9	5.5	4.0	0.7	2.9
			By type and control of institution: Fall 1990			
Public	77.6	8.9	6.0	4.1	0.8	2.5
Private	78.6	9.1	3.7	3.7	0.4	4.4
4-year	79.2	8.4	4.0	4.0	0.6	3.8
2-year	75.6	9.8	8.0	4.1	1.0	1.4

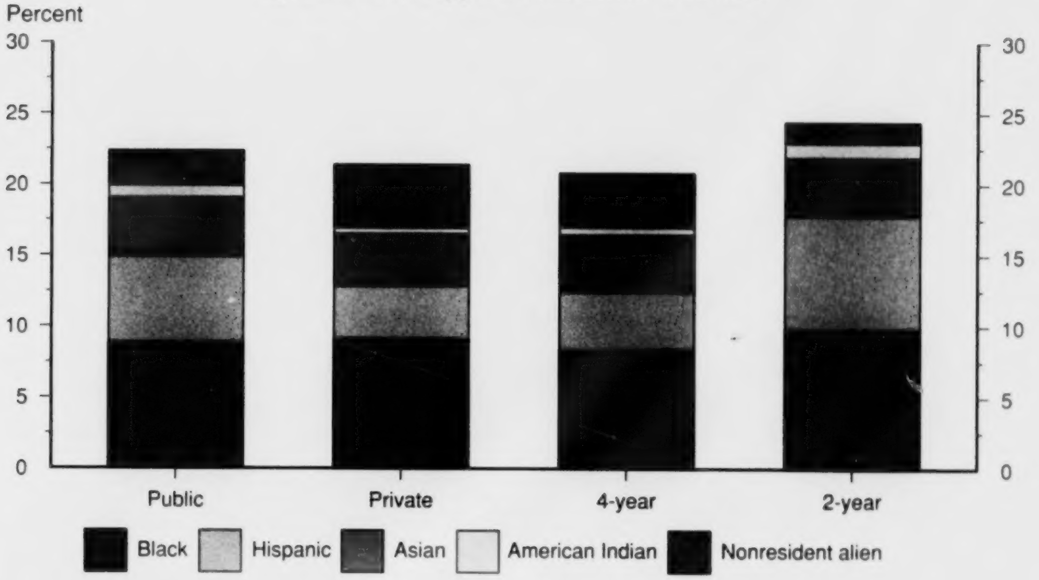
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years.

Percentage of total enrollment in institutions of higher education, by race/ethnicity: Fall 1976–1990

All institutions: Fall 1976–1990



By control and type of institution: Fall 1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of fall enrollment, various years.

Children in poverty

- **The percentage of all children below the poverty level decreased from 27 percent in 1960 to a low of 15 percent in 1970, but has since risen. During the 1980s, this figure has ranged between 18 and 22 percent.**
- **The percentage of black children living in poverty decreased by more than 20 percentage points between 1960 and 1990, though it was higher throughout the 1980s than it had been during the 1970s. Nevertheless, in 1990, black children were almost three times as likely as whites to be living in poverty.**

The effects of poverty on children's education are well documented. Children from poor families have lower average achievement and higher average dropout rates than other children. Children from poor homes may lack adequate preparation for elementary school learning, and they may need a greater number of school services than other children.

- **The percentage of black children in poverty who lived with a female householder increased from 30 percent in 1960 to 81 percent in 1990.**

Children under 18 living in poverty: Selected years 1960–1990

	Percent of all children who live in poverty				Percent of children living in poverty who live with a female householder[1]			
Year	Total	White	Black	Hispanic[2]	Total	White	Black	Hispanic[2]
1960[3]	26.5	20.0	65.5	—	23.7	21.0	29.4	—
1965[4]	20.7	14.4	47.4	—	31.7	27.0	49.7	—
1970	14.9	10.5	41.5	—	45.8	36.6	60.8	—
1975	16.8	12.5	41.4	34.5	51.4	41.7	70.1	42.9
1980	17.9	13.4	42.1	33.0	52.8	41.3	75.4	47.1
1981	19.5	14.7	44.2	35.4	52.2	42.0	74.3	48.5
1982	21.3	16.5	47.3	38.9	—	—	—	—
1983	21.8	17.0	46.2	37.7	50.0	39.3	74.5	42.5
1984	21.0	16.1	46.2	38.7	52.4	41.8	74.9	47.2
1985	20.1	15.6	43.1	39.6	53.8	43.0	78.4	49.6
1986	19.8	15.3	42.6	37.1	56.6	45.7	80.5	49.5
1987[5]	19.7	14.7	44.4	38.9	57.4	47.0	80.2	47.6
1988[5]	19.0	14.0	42.8	37.3	59.3	50.0	79.6	49.1
1989	19.0	14.1	43.2	35.5	56.7	46.3	76.5	46.6
1990	19.9	15.1	44.2	37.7	58.1	46.9	80.5	47.9

— Not available.

[1] No husband present. The householder is the person in whose name the housing unit is owned or rented.

[2] Hispanics may be of any race.

[3] Data presented are for 1959 for blacks, and 1960 for whites and total.

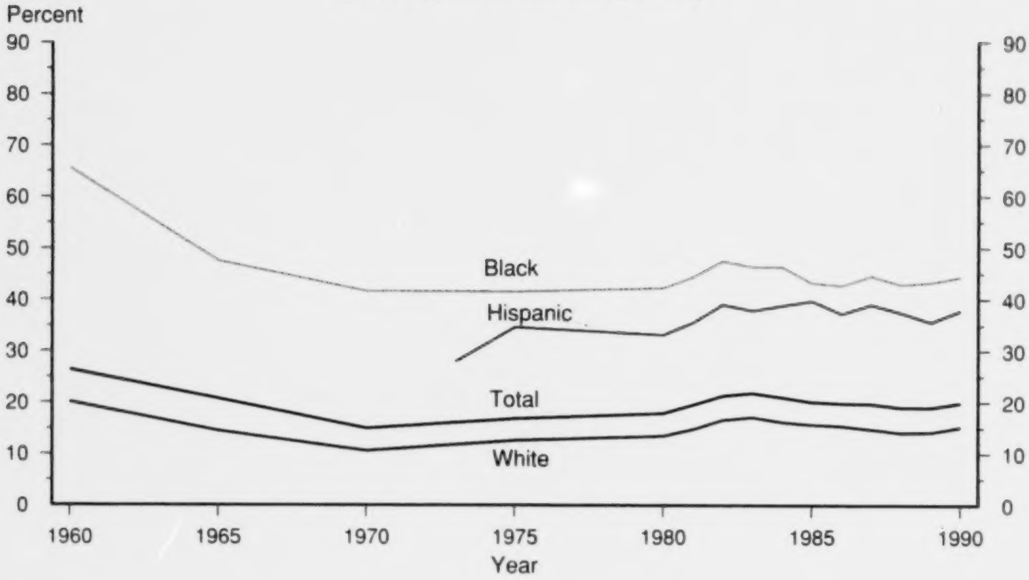
[4] Data presented are for 1967 for blacks, and 1965 for whites and total.

[5] Data revised from previously published figures, based on new processing procedure. The 1987 and 1988 figures are also revised to reflect corrections to files after publication of the 1988 advance report, *Money Income and Poverty Status in the United States: 1988*, P-60, No.166.

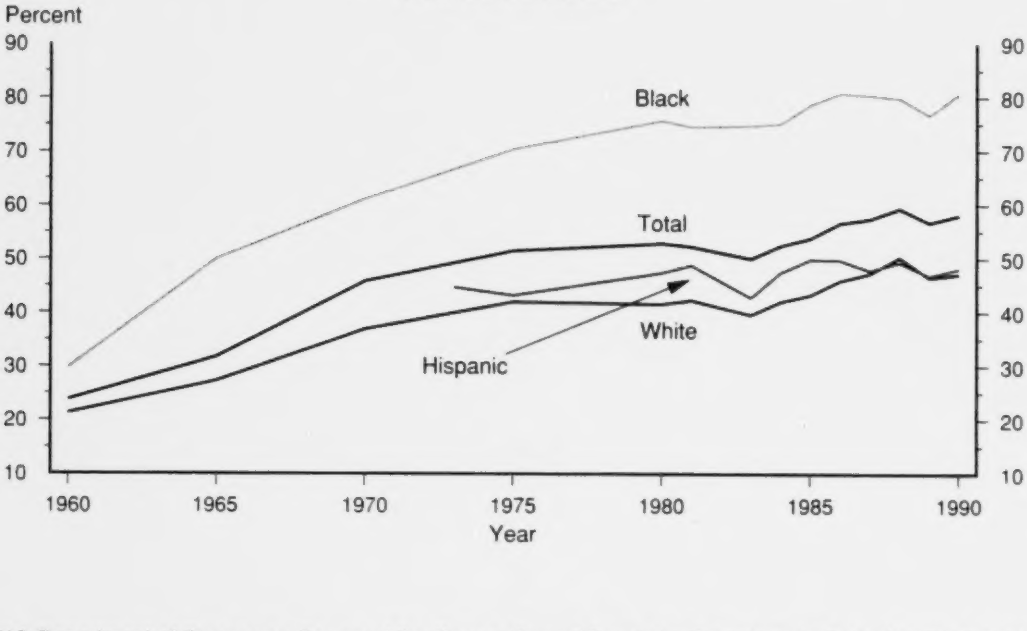
SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, series P-60, "Poverty in the United States: . . .," various years (based on March Current Population Surveys).

Children under 18 in poverty: Selected years 1960–1990

Percentage of children in poverty



Percentage of children in poverty living with female householder



SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, series P-60, "Poverty in the United States: . . . ," various years (based on March Current Population Surveys).

Programs and services offered by schools

- **During school year 1987–1988, public schools were more likely than private schools to have programs targeted to diverse students with special needs—bilingual education, English as a second language, programs for the handicapped or for the gifted and talented, and diagnostic and prescriptive services.**
- **Urban and suburban public elementary schools (those with kindergarten and/or fourth-grade students) were more likely to have an extended day or before- or after-school day care program than schools in small cities or rural communities.**

As schools undertake to serve increasingly diverse student bodies, they are providing more than just basic skills education aimed at the average student. However, the programs and services that a particular school offers are a function of the resources available to the school as well as the needs of the students.

- **Urban and suburban public schools were more likely to offer bilingual education or English as a second language than schools outside urban areas.**

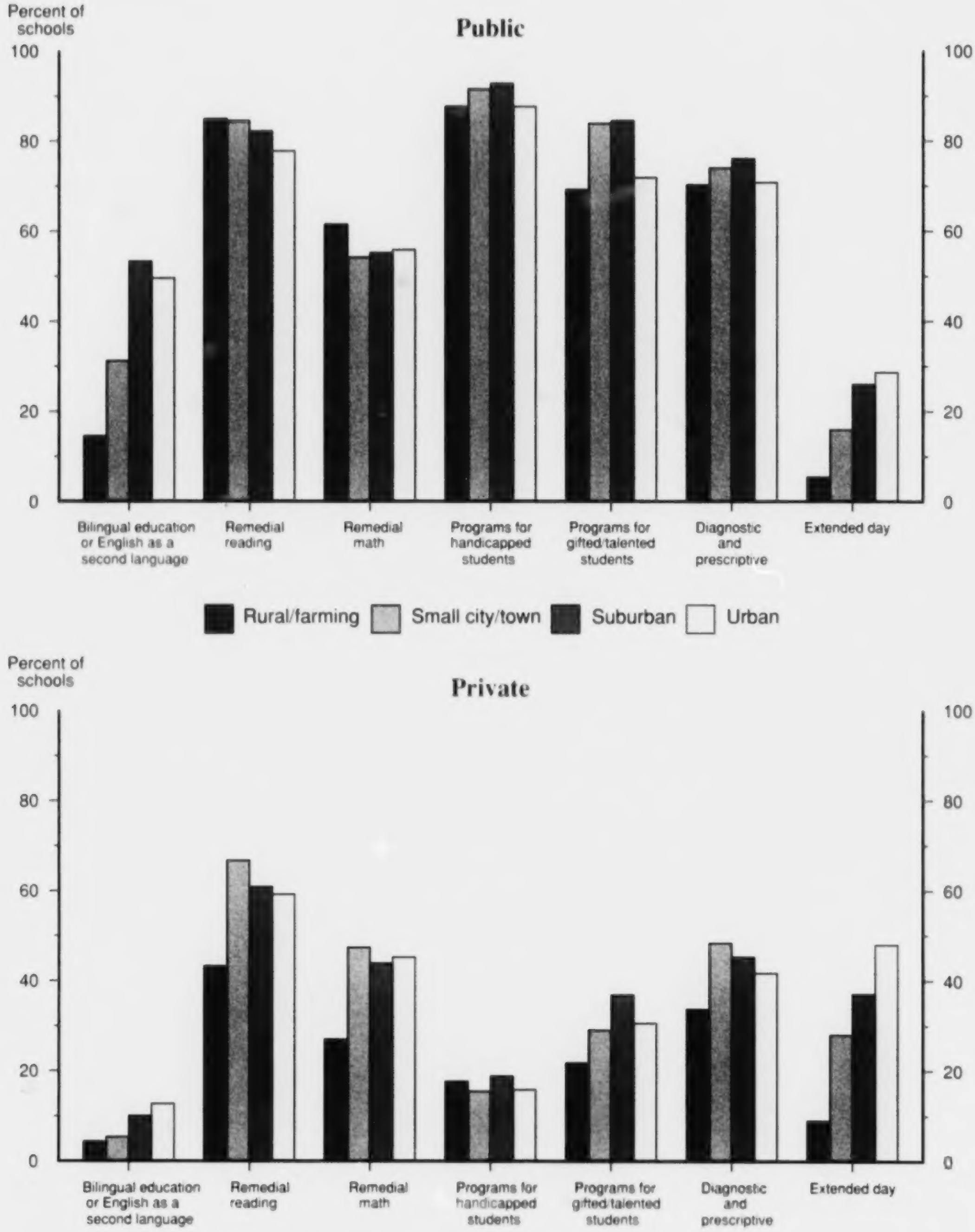
Percentage of schools offering various programs or services by control, grade level, and urbanicity: School year 1987-1988

Grade and urbanicity	Bilingual education	English as a second language	Remedial reading	Remedial math	Programs for the handi-capped	Programs for the gifted and talented	Vocational/ technical programs	Diagnostic and prescriptive services	Extended day
					Public				
4th grade	20.8	34.1	82.6	57.3	89.5	76.0	8.3	72.3	17.4
Rural/farming	11.4	14.6	84.9	61.5	87.7	69.2	16.9	70.2	5.5
Small city/town	15.2	31.3	84.5	54.2	91.5	83.9	4.1	74.0	16.0
Suburban	25.2	53.4	82.2	55.2	92.8	84.5	3.6	76.1	26.0
Urban	35.7	49.6	77.8	55.8	87.6	71.8	3.9	70.8	28.7
12th grade	16.3	29.1	75.2	67.7	91.3	61.1	92.6	72.0	4.6
Rural/farming	11.8	15.9	71.3	62.3	92.0	57.7	93.3	68.2	1.8
Small city/town	14.3	28.9	76.4	70.3	91.6	64.8	95.9	73.0	5.0
Suburban	18.6	49.0	78.9	72.1	94.5	65.7	94.1	79.7	5.9
Urban	29.3	47.2	80.9	75.7	86.0	61.5	85.3	74.3	10.8
					Private				
4th grade	6.7	8.5	57.9	41.6	16.7	29.5	7.0	42.3	32.7
Rural/farming	4.4	3.9	43.3	27.0	17.6	21.8	8.5	33.7	8.9
Small city/town	4.5	5.4	66.7	47.4	15.4	29.0	6.8	48.4	28.0
Suburban	10.0	9.9	60.9	43.9	18.8	36.9	4.7	45.3	37.1
Urban	7.8	12.7	59.2	45.2	15.8	30.6	7.5	41.7	48.0
12th grade	7.6	13.2	53.0	44.0	18.7	31.1	24.5	35.8	22.2
Rural/farming	8.0	9.2	47.0	36.7	12.6	27.0	16.2	31.2	12.5
Small city/town	5.5	11.7	56.5	42.4	13.5	28.5	22.6	34.6	24.8
Suburban	8.9	10.2	57.8	49.6	27.5	39.1	22.5	46.8	25.0
Urban	8.3	18.2	51.5	46.3	21.1	31.0	31.6	33.5	24.6

NOTE: See supplemental table 40-1 for programs and services offered at schools enrolling kindergarten and/or 8th-grade students and supplemental note to *Indicator 40* for an explanation of the above programs and services.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-1988.

Services and programs in schools with 4th-grade students by urbanicity and control: School year 1987–1988



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

School size

- **Private schools were more likely to be small (enrollments less than 300 students) than public schools at all grade levels during school year 1987–1988.**
- **Among public schools, secondary schools (those with 8th- and/or 12th-grade students) were generally larger than elementary schools (those with kindergarten and/or 4th-grade students).**
- **Public schools in rural or farming communities were least likely to have large total enrollments (500 or more students).**
- **Urban public schools enrolling 12th-grade students were no more likely than suburban schools to enroll more than 750 students.**

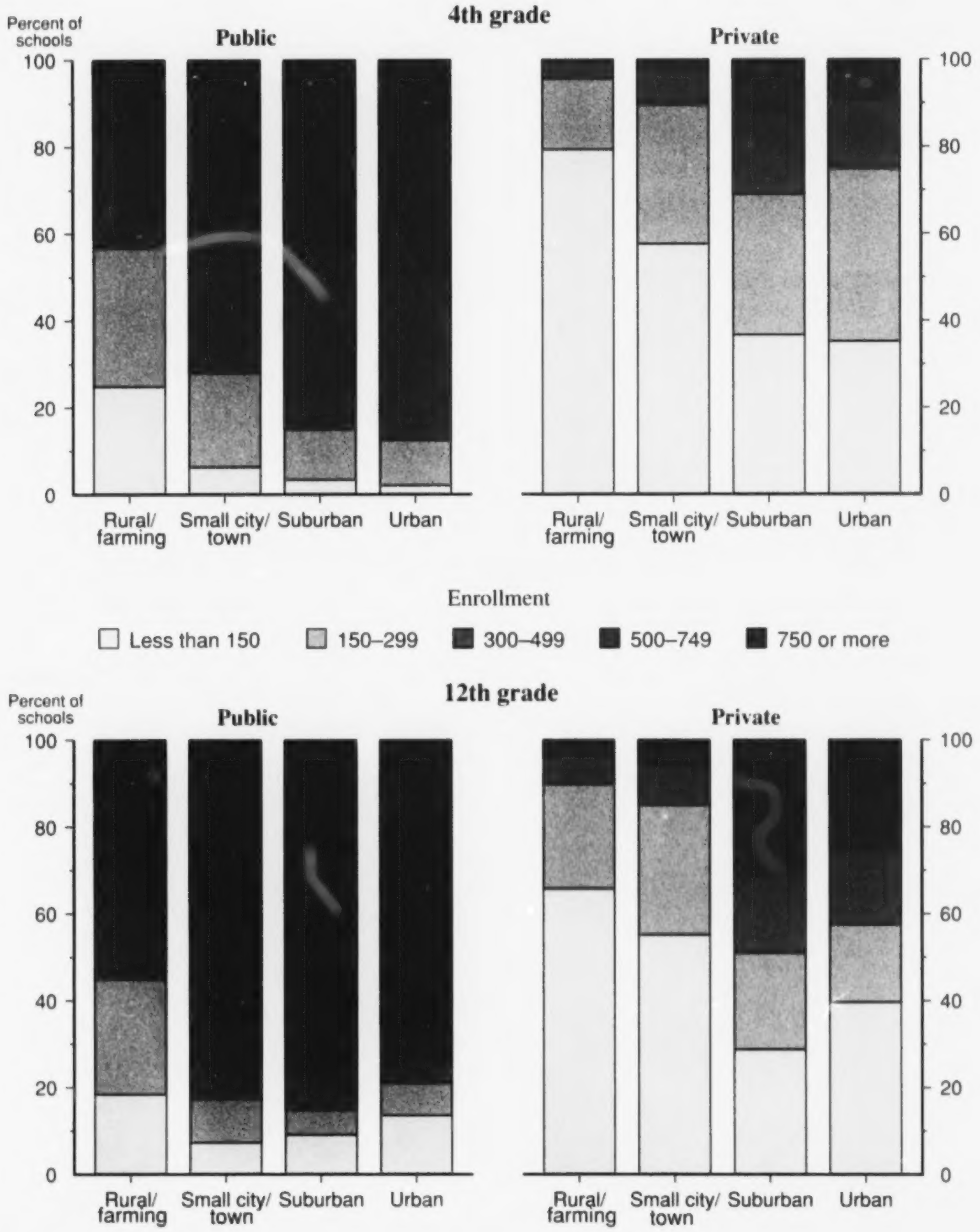
> *The prevailing educational philosophy for the last three decades has been that large schools could offer more comprehensive curricula and a wider variety of programs at lower cost. But small schools may have beneficial effects upon student participation, attendance, satisfaction, and achievement.*

School size by grade, control, and urbanicity: School year 1987–1988

Grade and urbanicity	Public school enrollment: Less than 150	150-299	300-499	500-749	750 or more	Private school enrollment: Less than 150	150-299	300-499	500-749	750 or more
	Percent of schools									
Kindergarten	10.8	20.1	36.5	24.2	8.4	47.3	33.6	12.4	4.9	1.9
Rural/farming	23.7	31.5	28.3	13.1	3.4	69.8	23.5	5.5	1.2	0.1
Small city/town	6.6	20.8	41.6	23.7	7.4	55.0	34.0	8.8	2.0	0.1
Suburban	4.0	11.5	42.9	31.4	10.2	40.8	30.4	17.6	7.9	3.4
Urban	1.9	10.6	38.4	34.4	14.6	37.2	39.1	14.4	6.5	2.8
4th grade	11.0	20.6	36.1	24.2	8.1	50.3	31.4	12.0	4.5	1.7
Rural/farming	24.8	31.9	27.0	12.9	3.3	79.3	16.3	3.6	0.7	0.0
Small city/town	6.3	21.7	41.5	24.1	6.4	57.6	32.0	8.4	2.0	0.1
Suburban	3.4	11.6	42.9	32.4	9.7	36.7	32.4	19.1	8.2	3.6
Urban	2.1	10.5	38.4	34.0	15.1	35.2	39.7	15.9	6.6	2.7
8th grade	15.2	18.6	25.3	23.6	17.3	47.0	31.9	13.6	5.4	2.1
Rural/farming	24.1	29.3	27.3	14.3	5.0	80.2	14.9	3.8	1.1	0.0
Small city/town	3.2	13.2	32.3	31.8	19.5	53.0	34.3	10.3	2.4	0.2
Suburban	8.4	6.7	24.4	28.7	31.8	29.7	33.1	22.6	10.3	4.3
Urban	9.7	5.6	13.9	35.1	35.8	30.9	40.6	17.4	7.6	3.4
12th grade	13.8	16.6	18.2	15.8	35.6	46.8	22.9	13.1	8.7	8.4
Rural/farming	18.4	26.6	25.9	18.3	10.8	65.7	24.1	6.7	3.3	0.2
Small city/town	7.3	10.1	18.3	20.6	43.7	55.1	29.9	9.1	3.4	2.5
Suburban	9.1	5.7	8.7	11.4	65.1	28.8	22.3	17.9	13.5	17.6
Urban	13.5	7.4	5.9	7.3	65.8	39.6	17.9	17.1	13.0	12.4

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

Size of schools by grade level, control, and urbanicity: School year 1987–1988



SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

Instructional practices in eighth-grade mathematics classes

- **In 1990, eighth-grade math students reported that solving problems from a textbook was the instructional technique most likely to be used daily in their math classes. Computers and reports or projects were most likely never to be used.**
- **A greater percentage of eighth-grade females than males reported that they never used computers or wrote reports or projects in their math class.**
- **Generally, daily use of problems from the text was associated with higher math proficiency scores. A greater percentage of students used this technique daily in high ability math class than did students in low ability classes.**

Instructional practices used in classrooms are thought to have a strong influence on the learning of students. What students are taught can vary widely within schools and among different students. An analysis of instructional practices indicates the type of instruction which is being offered to U.S. students.

Frequency of use of instructional technique in eighth-grade mathematics classes, as reported by students, by sex of student and ability grouping of math class: 1990

Instructional technique used	Frequency of use	Average math proficiency	Total	Sex		Ability grouping of math class[1]			
				Male	Female	High	Average	Low	Mixed
				Percent of students					
Problems from text	Daily	266.8	73.7	71.8	75.7	84.4	74.9	67.6	70.5
	Weekly	240.5	5.6	5.6	5.5	2.5	4.6	8.6	6.6
	Never	247.2	3.0	3.6	2.3	2.3	2.5	3.4	4.4
Problems from worksheets	Daily	246.9	17.5	18.9	16.0	10.1	18.4	24.9	18.8
	Weekly	260.9	25.3	25.4	25.2	24.6	27.1	24.9	24.3
	Never	268.8	12.2	11.4	13.0	15.9	10.4	6.8	11.4
Small groups	Daily	255.3	7.9	8.9	6.8	7.0	6.0	8.0	11.1
	Weekly	260.2	13.4	13.6	13.1	12.9	13.8	12.6	13.1
	Never	261.1	44.3	41.4	47.4	42.1	46.4	46.0	40.8
Manipulatives[2]	Daily	255.8	6.3	7.4	5.0	4.7	7.0	7.8	5.6
	Weekly	258.5	12.2	13.3	11.0	10.2	14.3	10.7	13.4
	Never	258.8	40.8	37.6	44.2	40.0	38.9	47.6	35.0
Calculators	Daily	267.8	15.3	16.2	14.4	15.0	14.4	10.1	19.4
	Weekly	262.0	12.3	13.2	11.2	13.4	14.5	11.2	11.6
	Never	257.0	39.3	36.9	41.7	35.8	38.2	49.2	34.8
Computers	Daily	246.6	5.6	6.5	4.7	4.7	6.2	8.4	3.5
	Weekly	249.0	6.9	6.8	6.9	5.9	6.7	9.2	6.0
	Never	263.7	70.4	66.8	74.2	71.0	74.2	69.8	69.3
Reports or projects	Daily	231.0	2.1	2.7	1.5	1.4	2.7	2.8	1.9
	Weekly	249.4	5.0	6.3	3.7	2.7	6.0	4.0	5.4
	Never	263.1	70.7	66.2	75.5	71.3	72.9	71.1	67.1

[1] Ability group identified by student.

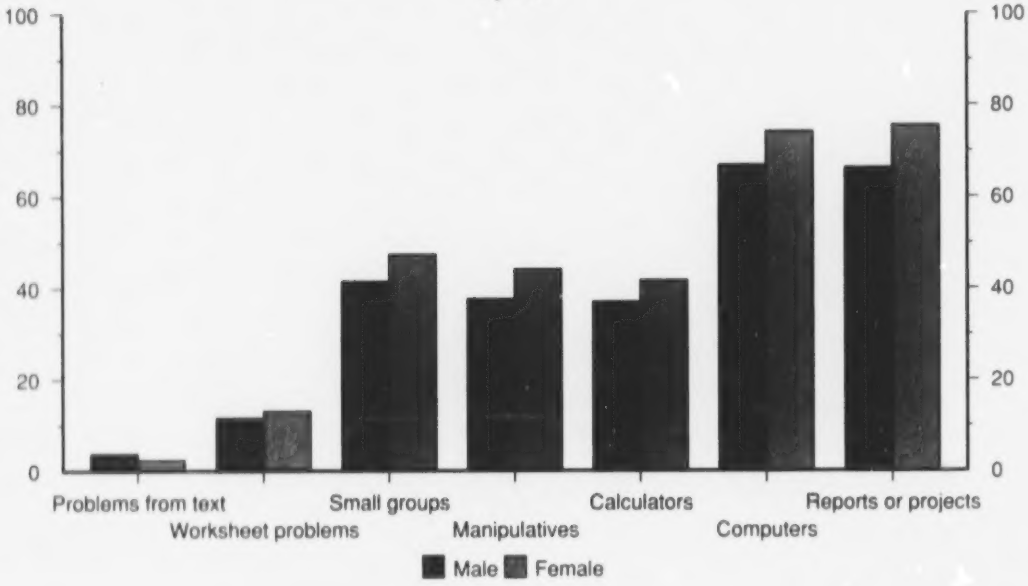
[2] Includes rulers, blocks, and solids.

NOTE: See supplemental tables for average NAEP math proficiency scores associated with the percentage of students responding to each category.

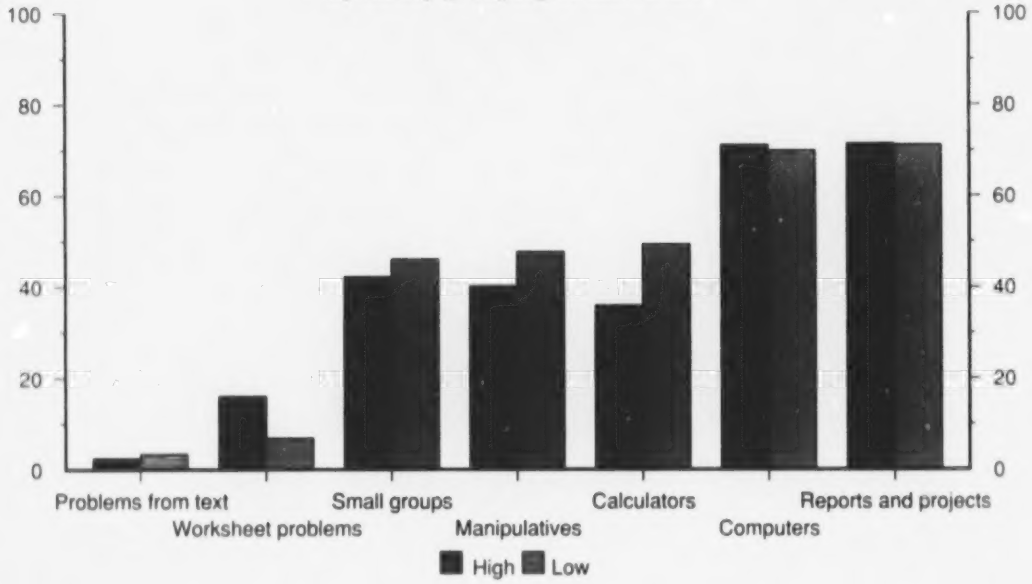
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress, Trail State Assessment, Mathematics Almanac, 1991.

Percentage of eighth-grade mathematics students who reported never using an instructional technique in their math class: 1990

By sex



By ability grouping of math class



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment of Educational Progress Trail State Assessment, Mathematics Almanac, 1991.

Crime in the schools

- **In general, 12- to 19-year-old students in public and private schools reported a similar percentage of occurrence of *most* types of criminal activity in their schools in 1989. However, public school students were much more likely than their private school counterparts to report the presence of gangs and to report seeing a teacher attacked or threatened with attack in their schools.**
- **Among race/ethnic groups, most reported a similar percentage of occurrence of *most* types of criminal activity in their school. However, whites were less likely than blacks, Hispanics, or Asian/Pacific Islanders to report the presence of gangs in their schools.**
- **Overall, 15 percent of all students between the ages of 12 and 19 reported the presence of street gangs in their schools in 1989, 16 percent indicated seeing teachers attacked or threatened with attack, and 12 percent reported that something was stolen from their desks, lockers, or other compartments.**

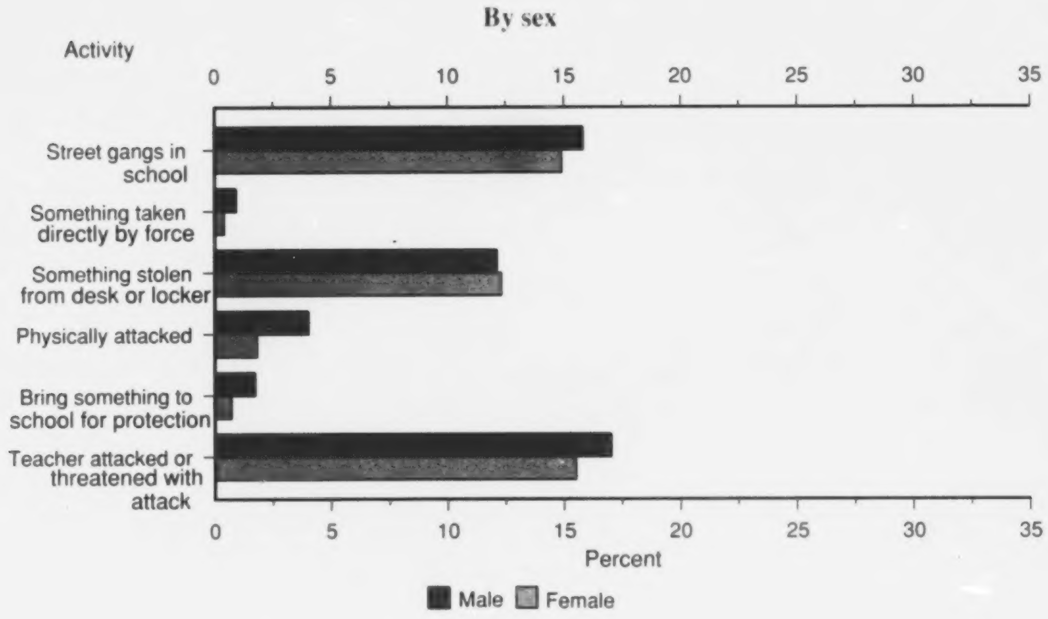
> *School safety is an issue which directly affects educators and students. For example, lack of safety in schools can reduce school effectiveness and inhibit student learning. Additionally, unsafe school environments might place a number of students who are already at risk of school failure for other reasons, in further difficulty.*

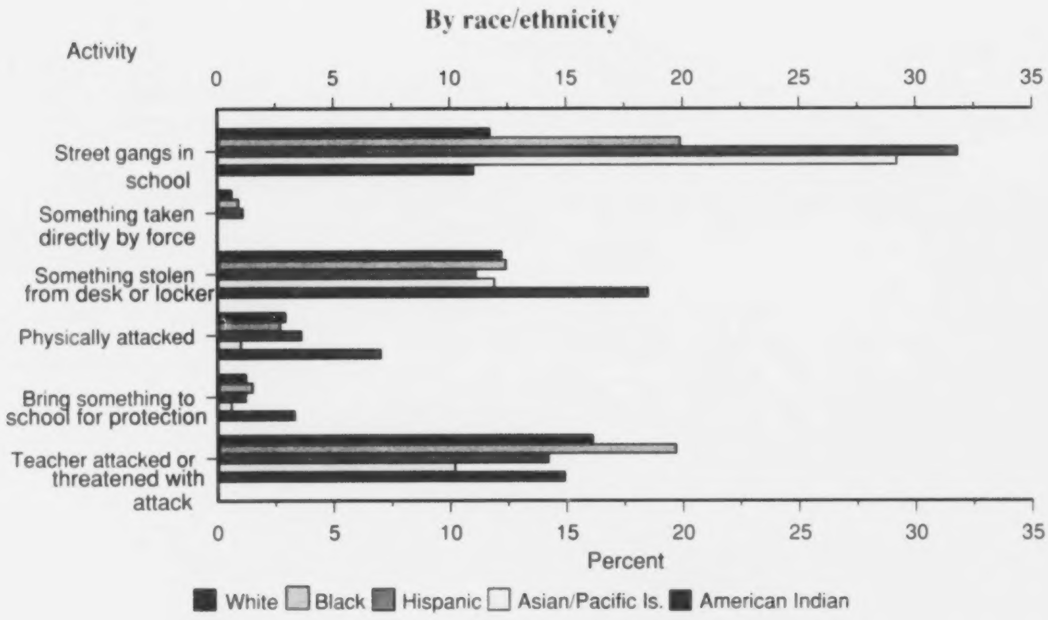
Percentage of 12- to 19-year-old students reporting occurrences of selected criminal activities in their school within the past 6 months, by sex, race/ethnicity, and control of school: 1989

		Sex		Race/ethnicity					Control of school	
Activity	Total	Male	Female	White	Black	Hispanic	Asian/ Pacific Is	American Indian	Public	Private
Street gangs in school	15.4	15.8	14.9	11.7	19.9	31.8	29.2	11.0	16.5	4.4
Something taken directly by force	0.7	0.9	0.4	0.6	0.9	1.1	0.0	0.0	0.7	0.8
Something stolen from desk/locker/other	12.2	12.1	12.3	12.2	12.4	11.1	11.9	18.5	12.4	10.8
Physically attacked	2.9	4.0	1.8	2.9	2.7	3.6	1.0	7.0	3.0	2.1
Bring something to school to protect yourself	1.2	1.7	0.7	1.2	1.5	1.2	0.6	3.3	1.2	1.2
Teacher attacked or threatened with attack	16.3	17.0	15.5	16.1	19.7	14.2	10.2	14.9	17.4	5.2

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Survey, 1989.

Percentage of 12 to 19 year old students reporting occurrences of selected criminal activities in their school within the past 6 months: 1989





SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Survey, 1989.

Student drug and alcohol use

- **Between 1975 and 1981, the percentage of high school seniors who had ever used drugs increased by 10 percentage points. Since 1981, this figure has decreased by almost 18 percentage points—well below the 1975 level. Nevertheless, in 1991, 44 percent of high school seniors reported having used some illegal drug.**
- **After increasing between 1975 and 1985, cocaine use among high school seniors declined sharply through 1991.**
- **The percentage of high school seniors who had ever used alcohol has remained high and relatively stable since 1975.**

Drugs and alcohol interfere with thinking and reduces academic achievement. Crimes of violence may accompany or result from substance abuse. In these circumstances, school effectiveness and the achievement of all students may suffer. Data on drug and alcohol use can be used by educators and administrators to determine the scope of the drug and alcohol problem among students.

- **During the last half of the 1980s, white high school male and female seniors were more likely than their black counterparts to have ever used marijuana/hashish, cocaine, or alcohol. The difference was greatest in cocaine use.**

Selected drug and alcohol use by high school seniors : Selected years 1975–1991

	Percent who ever used				Percent who used in the last 30 days			
Year	All illegal drugs*	Marijuana/ hashish	Cocaine	Alcohol	All illegal drugs*	Marijuana/ hashish	Cocaine	Alcohol
1975	55.2	47.3	9.0	90.4	30.7	27.1	1.9	68.2
1977	61.6	56.4	10.8	92.5	37.6	35.4	2.9	71.2
1979	65.1	60.4	15.4	93.0	38.9	36.5	5.7	71.8
1981	65.6	59.5	16.5	92.6	36.9	31.6	5.8	70.7
1983	62.9	57.0	16.2	92.6	30.5	27.0	4.9	69.4
1985	60.6	54.2	17.3	92.2	29.7	25.7	6.7	65.9
1987	56.6	50.2	15.2	92.2	24.7	21.0	4.3	66.4
1989	50.9	43.7	10.3	90.7	19.7	16.7	2.8	60.0
1991	44.1	36.7	7.8	88.0	16.4	13.8	1.4	54.0

* Includes marijuana, hallucinogens, cocaine, heroin, and other opiates, stimulants, sedatives, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under doctor's orders. Data for years 1982–1991 attempts to exclude the inappropriate reporting of non-prescription stimulants.

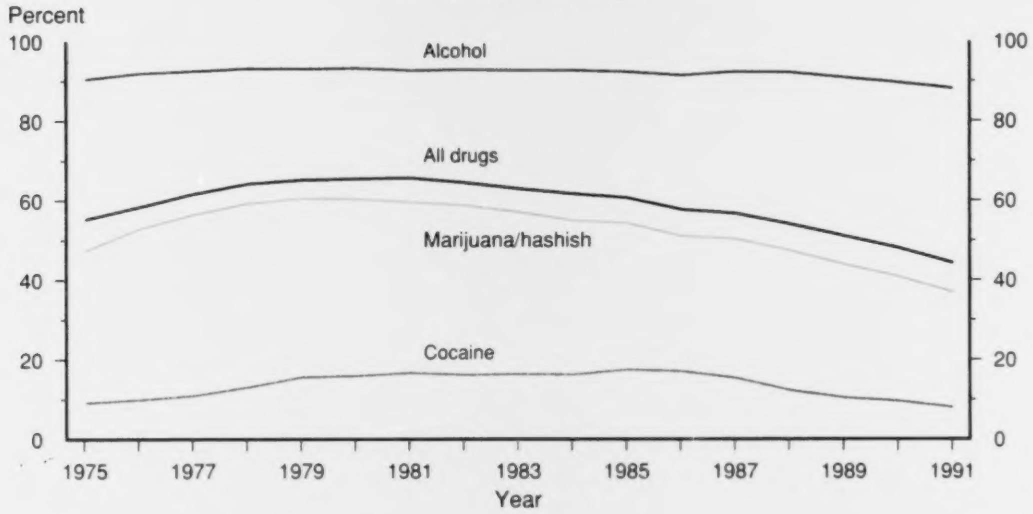
Percentage of high school seniors who have ever used drugs in last 12 months, by race/ethnicity, sex, and type of drug: 1985–1989 (combined data)

	White		Black		Mexican American		Puerto Rican/ Latin American		Asian American		American Indian	
Drug	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Marijuana/ Hashish	40.2	36.0	29.8	18.4	37.3	26.0	30.6	21.3	19.6	17.1	42.0	44.0
Cocaine	11.9	9.3	6.1	2.6	14.7	7.6	15.6	7.6	5.8	5.7	14.2	15.5
Alcohol	88.3	88.6	72.5	63.9	82.4	73.6	80.6	77.2	69.3	67.5	82.0	81.3

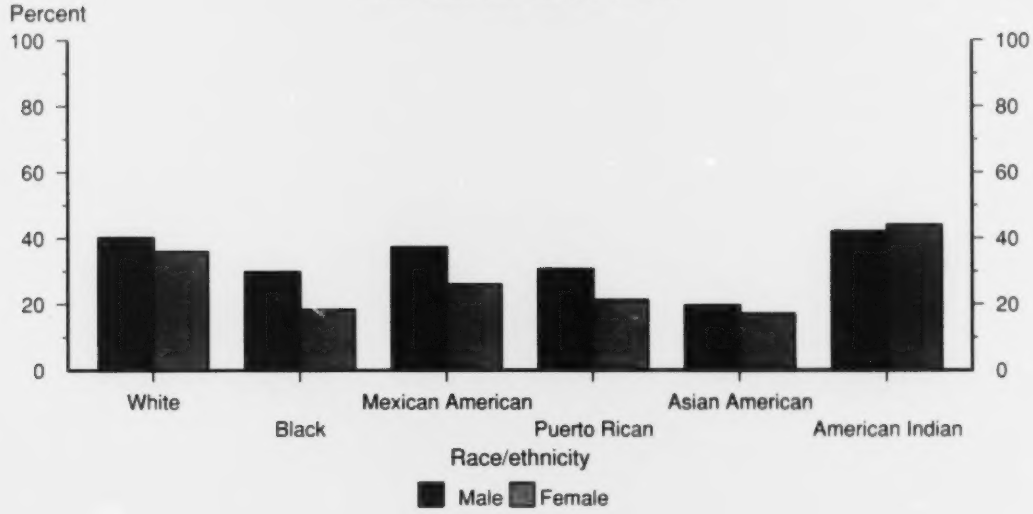
SOURCE: U.S. Department of Health and Human Services, Alcohol, Drug Use and Mental Health Administration, National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Student drug and alcohol use

Percentage of high school seniors who have ever used illegal drugs, marijuana/hashish, cocaine, or alcohol: 1975-1991



Percentage of high school seniors who have used marijuana or hashish, by race/ethnicity and sex: 1985-1989 (combined years)



SOURCE: U.S. Department of Health and Human Services, Alcohol, Drug Use and Mental Health Administration, National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Working while in high school

- **Almost one in three high school students was working in October 1990. However, many fewer (12 percent) were working 20 or more hours per week.**
- **Over the 1973–1990 time period, the percentage of high school students who were working varied with general economic conditions, falling during recessions and rising during expansions. After rising since 1983, it fell in 1990 as the economic slowdown began.**
- **Black high school students were less than half as likely as their white counterparts to work while still in school. Hispanics were more likely than blacks but less likely than whites to be working.**
- **In 1990, 46 percent of full-time college students were employed, and 24 percent were working 20 or more hours per week (supplemental table 45-2).**

Working during the school year leaves less time for students to concentrate on their studies or to participate in extracurricular activities. On the other hand, students may learn things from work experience that are not taught in the classroom. Those who work more while in school may earn more after leaving school. A moderate amount of work—less than 15 hours per week—may be associated with higher completion rates and better grades. A substantial amount of work—20 or more hours per week—may be detrimental to grades and attendance.

Percentage of 16- to 24-year-old students enrolled in high school who were employed in October, by race/ethnicity and hours worked per week: 1973–1990

	All students			White			Black			Hispanic		
Year	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	36.1	15.4	3.3	41.0	17.5	3.5	13.8	5.7	1.6	25.7	10.0	3.7
1974	35.2	15.1	3.1	40.0	16.9	3.4	16.3	8.1	1.9	23.3	10.7	2.8
1975	32.9	13.0	2.7	37.9	15.0	3.0	12.9	4.7	1.0	21.2	10.1	3.2
1976	33.4	14.3	2.6	38.9	16.6	2.6	12.7	5.2	2.4	20.1	10.8	2.7
1977	35.8	15.7	3.2	41.7	18.1	3.6	12.5	5.7	1.6	24.8	14.1	4.6
1978	38.2	16.2	2.9	43.9	18.4	3.2	16.1	6.8	1.4	28.0	15.9	3.1
1979	38.0	16.2	2.7	44.4	19.0	2.9	14.1	5.0	1.3	22.0	11.1	3.4
1980	35.1	13.3	2.3	40.7	15.2	2.1	13.7	5.7	1.9	24.5	11.6	4.9
1981	32.5	12.0	2.1	38.8	13.9	2.4	11.0	4.8	1.1	23.0	11.3	2.1
1982	29.5	9.7	1.6	35.9	11.8	2.0	8.9	2.4	0.1	15.0	6.2	1.5
1983	28.7	9.8	1.5	35.1	11.7	1.6	6.8	2.4	0.2	20.4	11.2	3.2
1984	31.0	11.5	1.3	36.4	13.1	1.2	13.4	6.1	0.6	23.2	10.5	3.7
1985	31.3	11.9	1.2	37.7	14.2	1.6	14.5	5.2	0.4	16.9	7.8	0.4
1986	34.1	13.7	1.9	40.3	15.7	2.2	14.5	6.5	0.8	25.8	15.8	1.7
1987	34.6	13.4	1.6	40.9	15.4	1.6	17.6	8.3	1.2	22.4	10.5	2.6
1988	35.1	14.2	1.6	40.6	16.0	1.6	19.3	8.2	1.1	23.2	10.3	2.8
1989	37.6	14.8	1.9	43.3	16.4	1.6	21.1	8.0	1.2	27.9	16.9	5.3
1990	32.1	11.9	2.0	38.0	13.6	1.8	16.7	5.0	1.0	24.6	13.2	4.5

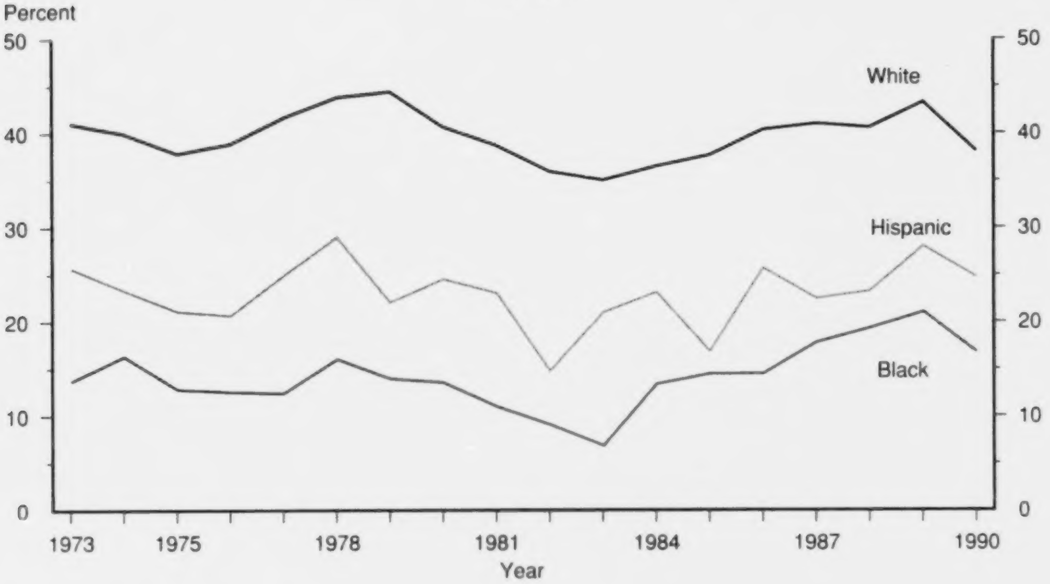
* Includes those with a job but not at work during the survey week.

NOTE: Numbers have been revised from previously published.

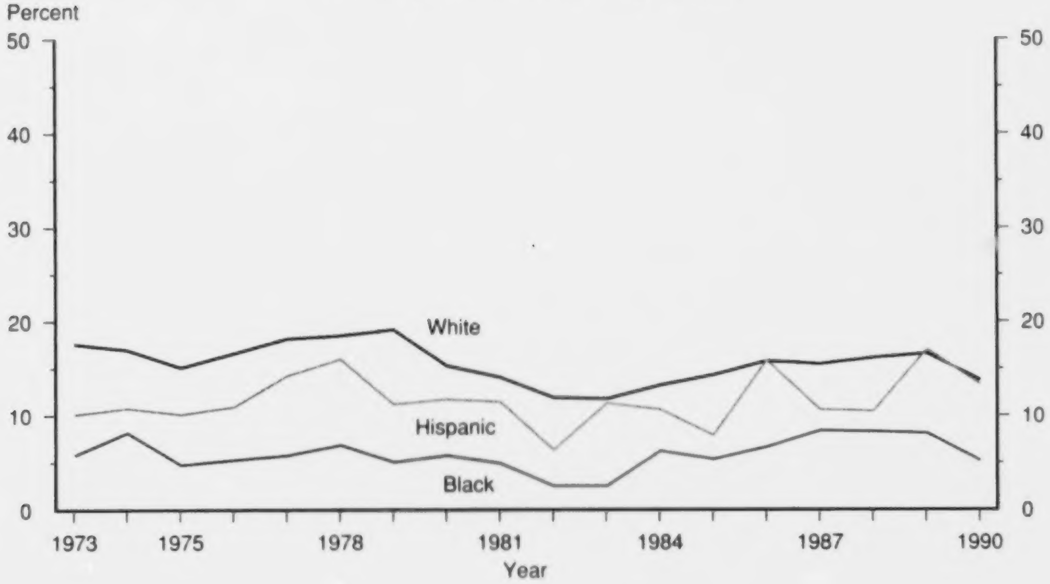
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Percentage of high school students 16- to 24-years-old who were employed: 1973–1990

Employed



Working 20 or more hours per week



SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Age of undergraduate college students

- **In 1990, 13 percent of undergraduates were 35 years old or over, up from 8 percent in 1976. Among part-time undergraduates, the share of such older students increased from 23 to 30 percent between 1976 and 1990.**
- **Only 53 percent of undergraduates were 21 years old or under in 1990, down from 62 percent in 1976.**
- **In 1990, 69 percent of full-time students were 21 years old or under, but only 20 of part-time students were. In contrast, 30 percent of part-time students were 35 years old or over compared to 5 percent of full-time students.**
- **About 1 in 4 undergraduate students 16–34 years old attends part-time. This rate increased from about 20 percent in 1973 to 25 percent in 1977 and since has changed very little (supplemental table 46-4).**

Students may be older if they are coming back to college to learn new skills for a new career or if, for a variety of reasons, they were not able to attend or complete college during the traditional college attendance ages. Older college students are more likely to have full-time jobs and family responsibilities. Thus, they are more likely to attend part-time and to live off-campus. To serve the needs of older students, colleges may offer more evening classes that meet only once a week.

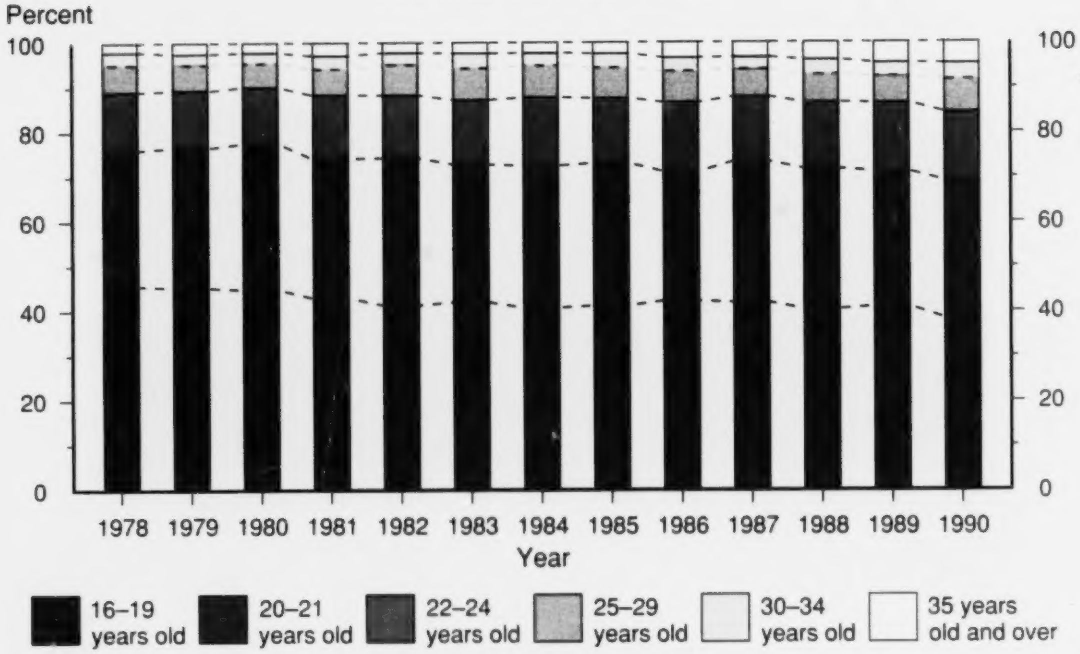
Age distribution of undergraduate students 16 years old and over, by attendance status: 1976 and 1978–1990

	Total			Full time			Part time		
Year	16-21 years old	22-34 years old	35 yrs old and over	16-21 years old	22-34 years old	35 yrs old and over	16-21 years old	22-34 years old	35 yrs old and over
1976	62.0	30.0	7.9	76.6	21.3	2.1	23.5	53.2	23.3
1978	60.7	30.7	8.7	76.0	21.9	2.1	24.0	51.6	24.5
1979	59.5	30.8	9.7	76.6	21.0	2.5	20.7	53.3	26.1
1980	60.3	31.6	8.1	77.5	20.3	2.2	20.4	57.7	21.9
1981	58.2	32.9	8.8	74.1	23.0	2.9	21.5	55.9	22.6
1982	58.9	33.0	8.1	74.2	23.6	2.3	22.9	55.2	21.9
1983	57.2	33.9	8.9	72.7	24.9	2.4	21.5	54.6	23.8
1984	57.5	34.2	8.3	72.4	25.2	2.4	21.4	55.9	22.7
1985	57.1	33.4	9.5	73.0	24.5	2.5	20.3	54.0	25.7
1986	54.3	35.1	10.6	71.1	25.4	3.5	18.7	55.6	25.8
1987	57.0	32.6	10.4	73.3	23.3	3.4	23.6	51.5	24.9
1988	55.4	32.7	11.9	71.7	24.4	3.9	20.1	50.6	29.3
1989	54.2	33.6	12.2	71.1	24.3	4.7	17.3	53.9	28.8
1990	53.4	33.8	12.8	69.0	26.2	4.8	19.6	50.1	30.3

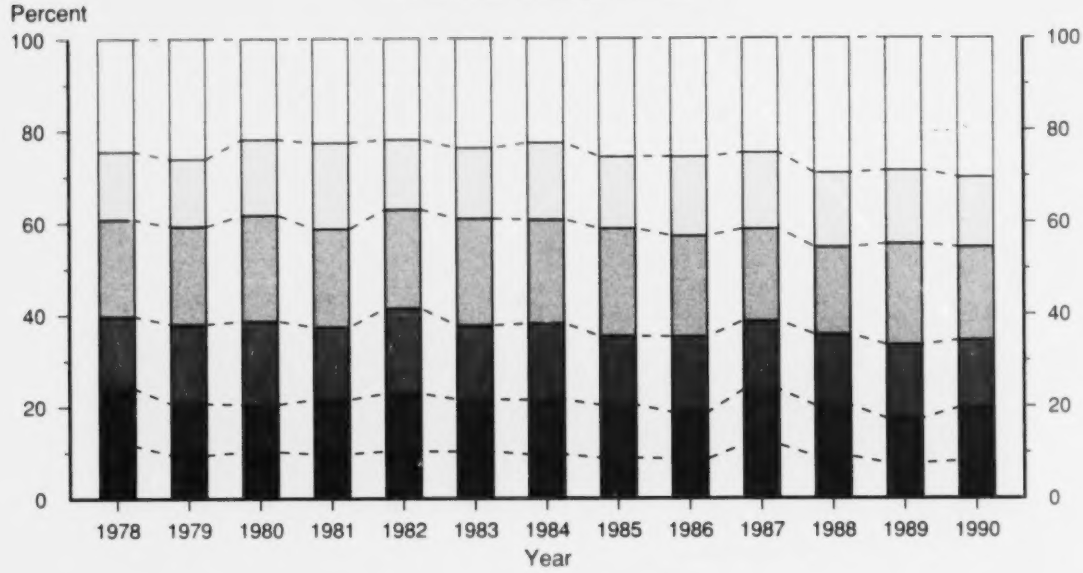
SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Surveys.

Age distribution of undergraduate students 16 years old and over, by attendance status: 1978–1990

Full-time undergraduates



Part-time undergraduates



SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment. . . ," various years; October Current Population Surveys.

Human and Financial Resources of Educational Institutions

The 1980s presented many fiscal challenges to schools, colleges, and universities, including slowing enrollment growth in higher education and the constitutionality of many states' systems of financing public elementary and secondary education. Nevertheless, calls to raise the quality of education grew as Americans increasingly felt the competitive pressure of the global marketplace and the decline in their economic prosperity.

Financial Resources

The United States invests a substantial amount in education. This investment can be measured in a variety of ways to facilitate comparison over time, across countries, and between sectors. Two types of measures are presented below: revenues (or expenditures) per pupil (in constant dollars); and the effort index, which is the ratio of revenues (or expenditures) per pupil to income per capita.

Per pupil. In 1991, revenues per pupil in public elementary and secondary schools were $5,342. This measure of resources per pupil varied widely across states from a low of about $3,100 in Utah, Idaho, and Mississippi to over $8,000 in New Jersey, New York, and Alaska (*Indicator 48*, Table 48-2). Within states there is additional variation which is the subject of lawsuits challenging the constitutionality of state education financing systems. In public higher education institutions, expenditures per full-time-equivalent (FTE) student in 1988–89 were $13,764 at universities, $9,452 at other 4-year colleges, and $4,888 at 2-year colleges.

In international comparisons, a different resource measure is used—current public expenditures for education divided by total enrollment including students in private institutions—to compare public policies of financial support of education. On this measure, the United States spent $3,834 per pupil in grades K–12 from public sources during the 1988–89 school year: This was substantially more than Japan, West Germany, France, and the United Kingdom and about the same as Canada. In higher education, where there is a large private sector in the United States, the U.S. spent $5,643 per FTE student in higher education from public sources, which was less than Japan, the United Kingdom, and Canada, but more than West Germany and France (*Indicator 49*).

Index. Another measure of societal support of education is revenues (or expenditures) per pupil expressed as a percentage of personal income (or GDP) per capita. This measure accounts for changes in the proportion of the population who are elementary and secondary students, which varies with demographic cycles such as the post-World War II baby boom.

Since 1930, public revenues per pupil as a percentage of personal income per capita rose substantially. In 1991, the index stood at 28.7 percent, up from 25.1 percent in 1982. It was 11.80 percent in 1930, the first year the index was available. It increased from 16.6 percent in 1956 to 26.1 percent in 1976, then remained fairly stable until 1982 when it began to increase again (*Indicator 48*).

State sources. Traditionally, public elementary and secondary schools were funded primarily from local sources. However, since 1979, states have become the largest single revenue source. In 1989, states contributed 48 percent of revenues compared to 46 percent from local sources. The remaining 6 percent was provided from federal sources (Table 48-3).

Federal sources. Although revenues from federal sources are relatively small, they are important because they fund special programs for economically and educationally disadvantaged children. Total federal support for elementary and secondary education was $24 billion dollars in 1991. The two largest programs were Child Nutrition Programs ($5.6 billion dollars) and Grants for the Disadvantaged ($5.3 billion dollars). Federal support for elementary and secondary education almost tripled between 1965 and 1980, fell 27 percent between 1980 and 1983, has increased since, but in 1991 was somewhat below the peak support level of 1980 (*Indicator 47*).

In postsecondary education, the federal role is more complex but still small. Federal support for higher education (excluding research) was $14 billion dollars in 1991, up substantially from $6 billion (constant 1991) dollars in 1965, but down from $18 billion dollars in 1975 (*Indicator 47*). Some of these funds are grants to students, some are paid to banks and other institutions that run federal student loan programs, and some are given directly to institutions to run student financial aid programs. In the fall of 1989, 42 percent of full-time undergraduates received some federal aid (*Indicator 52*).

Staff. The most important resource used in education is staff. In 1990, in elementary and secondary education, there were 11 full-time-equivalent (FTE) staff per 100 students. Of these, 6 were classroom teachers and 3.4 support staff, such as secretaries and bus drivers (*Indicator 53*). In higher education, there were 20 FTE staff per 100 FTE students. Of these, 6 were faculty and 3.8 support *professionals*, such as librarians, counselors, and coaches (*Indicator 54*). Within higher education there was substantial variation. At 2-year colleges, there were 10 FTE staff per 100 FTE students. At 4-year colleges, there were 25 FTE staff per 100 FTE students (*Indicator 54*). At 4-year colleges there were twice as many professional staff than at 2-year colleges and almost 3 times as many nonprofessional staff (Table 54-2).

The cost of staff resources are determined not only by the number of staff employed but also by their salaries. Both teacher and faculty salaries have been rising during the 1980s. In 1991, the average annual salary of elementary school teachers was about $32,400; for secondary school teachers it was $33,700. These levels were the highest of the 1960–1991 period during which teacher salaries rose until 1972, then fell until 1980, and since have been rising. A beginning teacher's salary, which did not rise as rapidly as average teacher salaries during the 1980s, stood at $22,800 in 1991. Teachers in private schools earn much less than their counterparts in public schools. For example, the average base salary for full-time teachers for the 1987–88 school year was $26,200 in public schools and $16,600 in private schools (*Indicator 55*).

Faculty in higher education earn substantially more than elementary and secondary school teachers, reflecting in part the higher education levels required of faculty. In 1990, an assistant professor's salary was about the same as a public secondary school teacher—$32,800 at private 4-year colleges; $33,100 at public 2-year colleges; and $35,200 at public 4-year colleges. Full professors earned, on average, substantially more—$46,500 at public 2-year colleges and about $56,000 at 4-year colleges. Like teacher salaries, faculty salaries fell in the 1970s and rose in the 1980s, but, unlike teacher salaries, have not regained all the ground lost (*Indicator 56*).

In addition, there has been considerable policy discussion regarding the ability of schools to attract and keep qualified teachers in specific subject areas such as math and science. However, *keeping* math and science teachers may not be the problem. The percentage of teachers in public secondary schools in 1987–88 leaving the teaching profession in the next year was no higher in math and science than in other fields (Table 58-1).

A substantial fraction of faculty in higher education are doctorate degree holders, so examining the careers of doctorate degree holders can shed light on the demand and supply of faculty. The age distribution of doctorate degree holders employed at 4-year colleges and universities is tilting toward older ages faster than for other employers (*Indicator 60*). Jobs for new doctorate degree recipients are increasingly not in higher education. Whereas, in the early 1970s, 2 out of 3 new doctoral degree recipients took a job at a 4-year college or university, the number fell to about 1 in 2 by 1990 (*Indicator 59*). As the number of doctorate degrees awarded was fairly stable over most of the period, this suggests that fewer new doctorates were taking jobs at 4-year colleges and universities.

Future changes in the faculty depend on whether forecast declines in enrollment in higher education materialize. If they do, then the retirement of the increasingly older faculty may allow colleges and universities to continue to hire new doctorates. However, if many older faculty, aided by the abolishment of mandatory retirement practices, do not retire, then new doctorates may out of necessity go increasingly to other employers.

Federal support for education

- **Between 1965 and 1980 federal on-budget support for education rose 128 percent in inflation adjusted dollars, then dropped 18 percent between 1980 and 1983. Since then, on-budget education expenditures have risen 19 percent to an estimated level of $54.6 billion.**
- **In 1991, expenditures on elementary and secondary education made up 45 percent of on-budget support, while postsecondary expenditures made up 25 percent and funds for university research 23 percent.**

> *Federal expenditures on education make up only a small share of total education expenditures. However, how those dollars are spent is one way the federal government indicates its education priorities and tries to influence what happens in elementary/secondary and higher education.*

- **Child Nutrition Programs and Grants for the Disadvantaged (Chapter 1) made up the largest share of elementary and secondary federal support ($5.6 and $5.3 billion respectively in FY 1991). Between 1980 and 1991 the largest percentage increases in elementary and secondary support were in Education for the Handicapped (73 percent), Head Start (71 percent), and Overseas Dependents Schools (66 percent), while the largest decreases were in Vocational and Adult Education (36 percent), Impact Aid (28 percent), and classroom training programs (21 percent) (supplemental table 47–2).**
- **The largest federal programs supporting postsecondary education in 1991 were Student Financial Assistance ($6 billion) and the Guaranteed Student Loan Program ($4.2 billion). Overall federal on-budget support for postsecondary education declined 23 percent between 1980 and 1991 (supplemental table 47–2).**

Federal on-budget support for education in constant FY 1991 dollars, by category: Fiscal years 1965 to 1991

Fiscal year	Total (millions)	Elementary/ secondary (millions)	Post-secondary (millions)	Other education[1] (millions)	University research (millions)
1965	$24,563	$8,950	$5,518	$1,726	$8,368
1970	45,018	20,954	12,391	3,467	8,207
1975	56,309	25,844	18,230	3,915	8,321
1980	56,041	26,174	17,865	2,529	9,474
1981	53,894	23,517	17,870	3,227	9,280
1983	45,950	19,227	14,232	2,917	9,574
1985	48,104	20,949	13,580	2,612	10,963
1987	48,369	20,702	11,897	3,330	12,441
1989	52,600	21,647	14,283	3,490	13,180
1991[2]	54,638	24,436	13,702	3,671	12,829

[1] "Other" education programs include libraries, museums, cultural activities, and miscellaneous research.

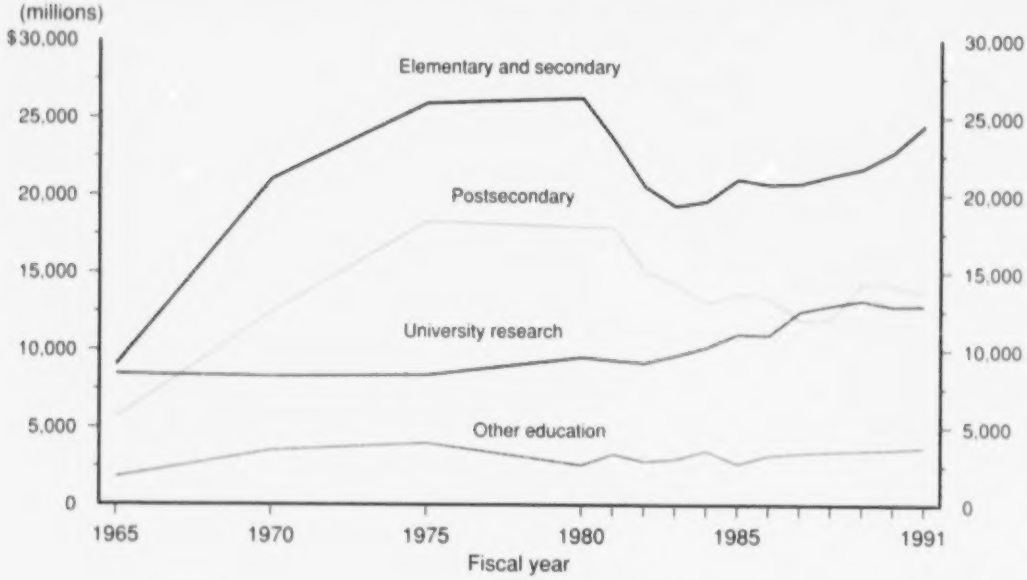
[2] Estimates of FY 1991 outlays, provided by U.S Office of Management and Budget and various federal agencies.

NOTE: Other forms of federal support include non-federal funds generated by federal programs and estimated federal tax expenditures for education. See supplemental note to *Indicator 47* for further elaboration.

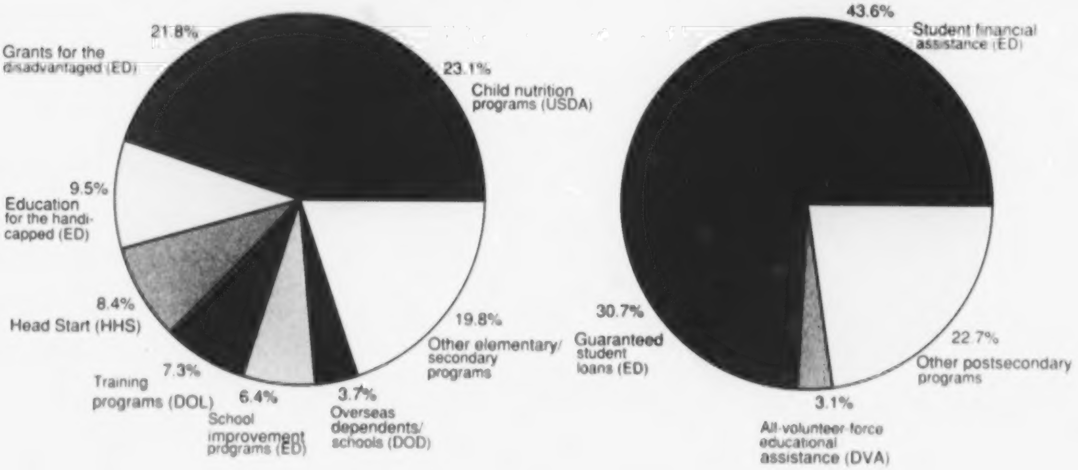
SOURCE: U.S. Department of Education, National Center for Education Statistics, *Federal Support for Education: Fiscal Years 1980 to 1991.*

Federal on-budget support for education, by category

Trends: In constant FY 1991 dollars, selected fiscal years 1965–1991



Fiscal year 1991, by program


Elementary and secondary programs

Higher education programs

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Federal Support for Education: Fiscal Years 1980 to 1991.*

National index of public school revenues

- **Between the school years ending 1930 and 1972, the national index increased 13.4 points from 11.8 to 25.2. Between school years ending 1972 and 1982, the index remained fairly stable. Since then, the index has increased 3.6 points to 28.7.**
- **In 1991, per pupil revenues ranged from $3,115 in Utah to $8,186 in New York. The state index ranged from below 22.5 in Idaho, Utah, and Tennessee to above 36.0 in Alaska, New York and West Virginia (supplemental table 48–2).**
- **Between 1980 and 1991, the largest increase in the state index occurred in West Virginia and Connecticut, and the greatest decline in Idaho, Massachusetts, and Utah (supplemental table 48–2).**

The national index reflects monies raised to educate the average public school student relative to the taxpayer's ability to pay. The numerator is revenues per pupil, a measure of the resources available or services accorded to the average pupil. The denominator is income per capita, a measure of the average taxpayer's ability to pay.

National index of public school revenues per pupil in relation to per capita personal income: Selected school years ending 1930–1991

School year ending	National index	Public elementary/ secondary revenues[1] (billions)	Public elementary/ secondary enrollment (millions)	Total education revenues per pupil[1]	Total personal income[2] (billions)	Total population[3] (millions)	Per capita personal income[2]
1930	11.8	$16.0	25.7	$623	$646	121.9	$5,298
1940	16.2	21.2	25.4	835	677	131.0	5,169
1950	15.7	29.8	25.1	1,188	1,133	149.2	7,592
1960	19.1	66.3	35.2	1,885	1,757	177.8	9,882
1962	20.2	76.6	37.5	2,045	1,862	183.7	10,137
1964	20.3	87.6	40.2	2,181	2,032	189.2	10,739
1966	21.2	105.1	42.2	2,493	2,289	194.3	11,781
1968	22.4	125.0	43.9	2,847	2,525	198.7	12,705
1970	23.1	143.4	45.6	3,144	2,753	202.7	13,584
1972	25.2	161.4	46.1	3,501	2,885	207.7	13,892
1974	24.7	171.4	45.4	3,772	3,242	211.9	15,299
1976	26.1	172.9	44.8	3,860	3,189	216.0	14,764
1978	25.6	175.6	43.6	4,029	3,465	220.2	15,735
1980	25.7	174.4	41.6	4,188	3,662	225.1	16,271
1982	25.1	158.3	40.0	3,956	3,623	229.9	15,754
1984	26.5	165.4	39.3	4,213	3,724	234.3	15,893
1986	27.1	181.1	39.4	4,595	4,039	238.5	16,938
1988	27.3	195.0	40.0	4,873	4,331	242.8	17,836
1990	28.9	218.8	40.5	5,399	4,621	247.4	18,682
1991[4]	28.7	220.2	41.2	5,342	4,646	250.0	18,584

[1] In constant 1990-91 dollars, using CPI adjusted to a school year basis.

[2] For the calendar year in which the school year began, in constant 1990 dollars.

[3] As of July 1, the year in which the school year began.

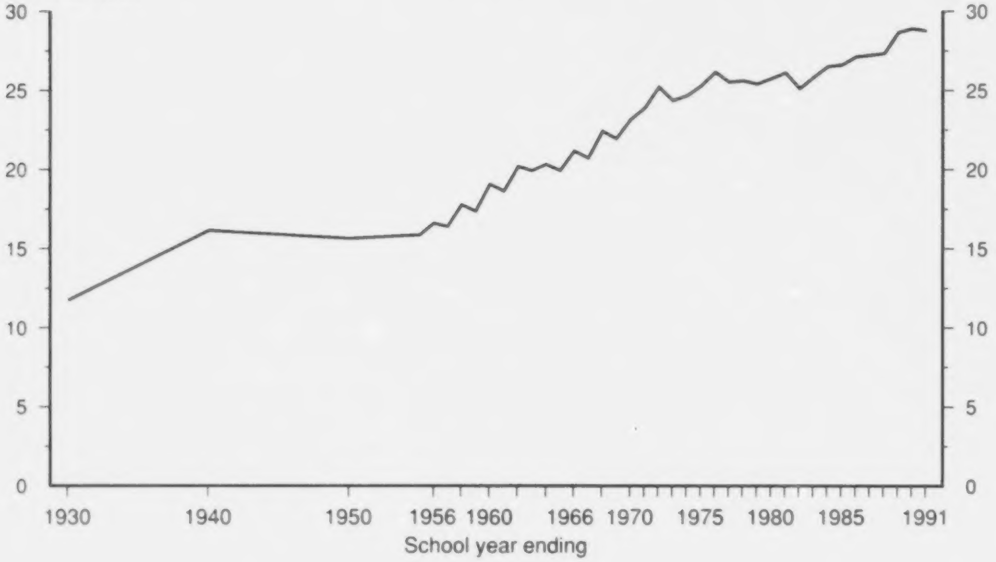
[4] Revenues and enrollments are from *Early Estimates, Public and Private Elementary Statistics: School Year 1991–1992.*

NOTE: For calculation of the national index and other values for this indicator, see supplemental note to *Indicator 48*. Data revised from previously published figures.

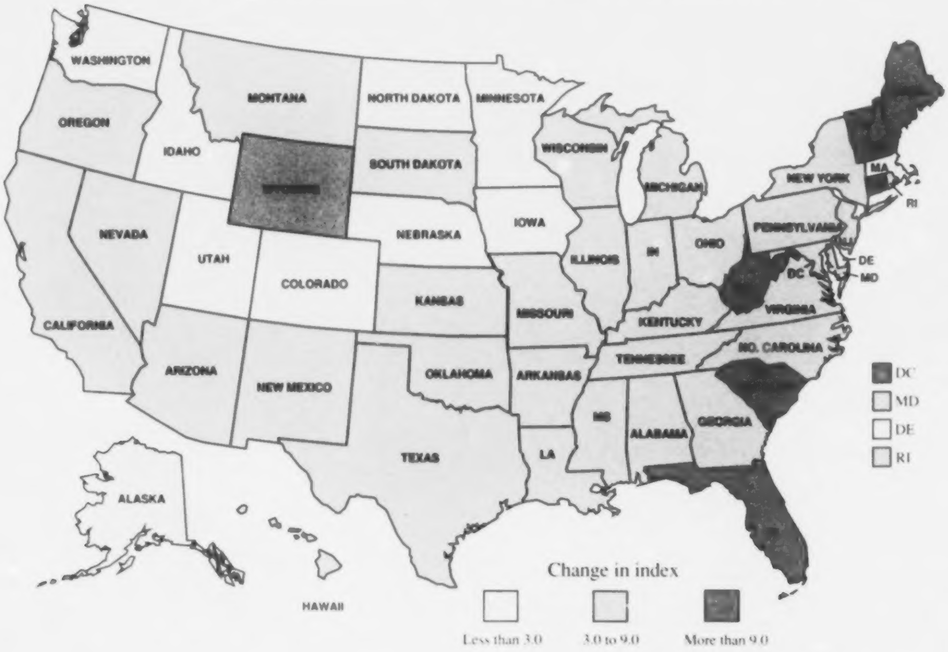
SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Survey, various years. *Early Estimates: Key Statistics for Public Elementary and Secondary Education*; U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business.*

Revenues per pupil as a percentage of personal income per capita

Trends: School years ending 1930–1991



Change between school years ending 1980 and 1991: by state


WASHINGTON
OREGON
IDAHO
MONTANA
NORTH DAKOTA
MINNESOTA
SOUTH DAKOTA
WISCONSIN
MICHIGAN
NEW YORK
MA
RI
NEVADA
UTAH
NEBRASKA
IOWA
PENNSYLVANIA
ILLINOIS
IN
OHIO
DE
MD
DC
CALIFORNIA
COLORADO
KANSAS
MISSOURI
VIRGINIA
KENTUCKY
TENNESSEE
NO. CAROLINA
ARIZONA
NEW MEXICO
OKLAHOMA
ARKANSAS
MS
ALABAMA
GEORGIA
TEXAS
LA
ALASKA
HAWAII
DC
MD
DE
RI
Change in index
Less than 3.0
3.0 to 9.0
More than 9.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, Common Core of Data Survey, various years. *Early Estimates: Key Statistics for Public Elementary and Secondary Education*; U.S Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

International comparisons of *public* expenditures for education

Public education expenditures are an indication of public investment in education. In the United States and other countries there are additional private expenditures for education. Several methods exist for comparing U.S. public education expenditures with those of other nations. Of the measures shown here, the first provides a measure of the fraction of a country's resources that are allocated to public education. The second provides a measure of the public investment in each child who is in the education system. The third provides a measure of public educational investment in each child compared to available resources per person in the country.

- **Across all three measures of public expenditures, only Canada showed a higher level of expenditures than the United States. Both France and West Germany showed consistently lower expenditure levels. The relative levels for Japan and the United Kingdom depend on the measure examined.**
- **Public expenditures for the 1988–89 school year in the United States were 3.6 percent of GDP for elementary and secondary education and 1.1 percent for higher education. Canada expended a larger fraction for both levels; Japan, West Germany, the United Kingdom and France expended smaller fractions for both.**
- **Public expenditures per student in the United States were $3,846 for elementary and secondary education and $5,643 for higher education in the 1988–89 school year. Canada, Japan, and the United Kingdom spent more per student in higher education, but less in elementary and secondary education. West Germany and France spent less per student at both levels.**

Current *public* expenditures for education in fiscal year 1989 U.S. dollars, by country: School year beginning fall 1988

			Current *public* education expenditures							
			Total				Per pupil			
	Enrollment[1] (thousands)		(millions)[2]		as percent of GDP[3]		($)[2]		as a percent of GDP[3]/capita	
Country	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education
United States	45,594	9,467	$175,362	$53,421	3.64	1.11	$3,846	$5,643	19.67	28.85
Japan	23,224	2,588	51,089	18,691	2.92	1.07	2,200	7,221	15.40	50.54
West Germany	10,253	1,687	22,234	7,178	2.56	0.83	2,168	4,255	15.32	30.07
United Kingdom	9,497	1,113	26,285	6,668	3.43	0.87	2,768	5,989	20.57	44.51
France	12,071	1,477	26,813	4,754	3.53	0.63	2,221	3,219	16.34	23.68
Canada	5,021	1,309	19,036	9,096	3.99	1.91	3,791	6,951	20.62	37.81

[1] Includes enrollment in both public and private schools, colleges, and universities. For the United States, full-time-equivalent-enrollment (FTE) in higher education is used; also, enrollment in kindergarten and nursery schools has been adjusted to account for half-day programs. For further discussion of the data see supplemental note to *Indicator 49*.

[2] Purchasing power parity indices were used to convert other currencies to U.S. dollars.

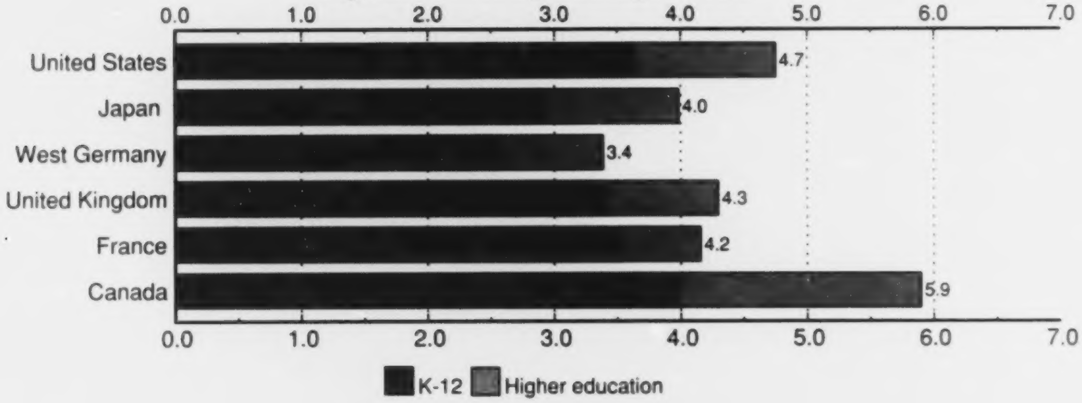
[3] Gross domestic product is gross national product less net property income from abroad.

NOTE: See notes to supplemental table 49-1 and the supplemental note to *Indicator 49* for a discussion of the data.

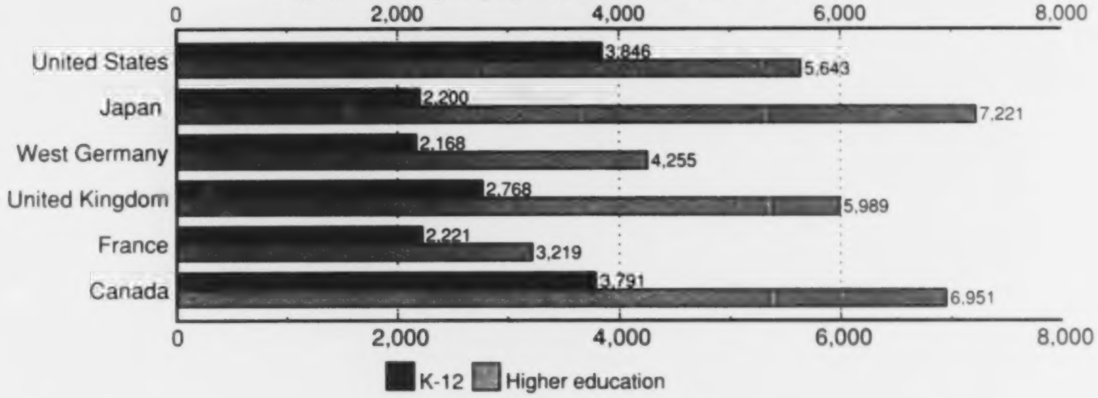
SOURCE: UNESCO *Statistical Yearbook*, 1991, 1990, and 1989 editions; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1990*; Organization for Economic Cooperation and Development, *National Accounts, Volume 1, Main Aggregates: 1965–1988.*

International comparison of *public* expenditures for education: 1988–1989

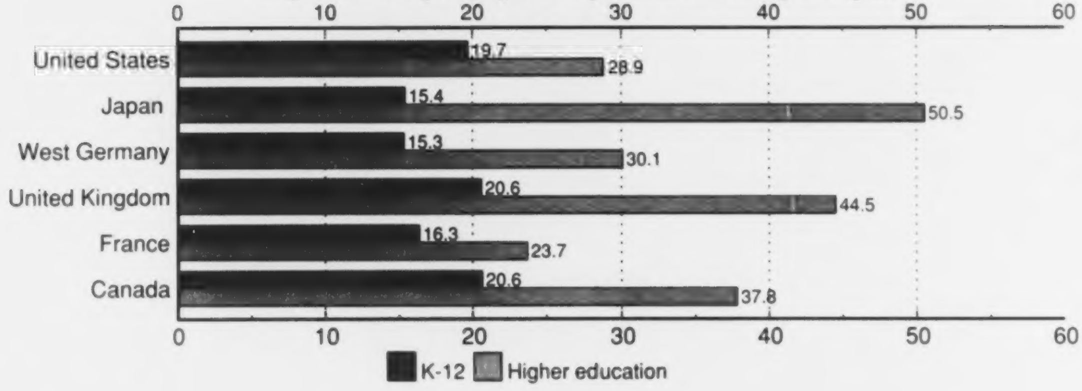
Expenditures as a percentage of GDP



Expenditures per pupil (1988-89 U.S. dollars)



Expenditures per pupil as a percent of GDP per capita



SOURCE: UNESCO *Statistical Yearbook*, 1991, 1990, and 1989 editions; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1990*; Organization for Economic Cooperation and Development, *National Accounts, Volume 1, Main Aggregates: 1965–1988.*

Revenue of colleges and universities

Many institutions of higher education are governed by localities or states primarily to serve their populations. Many others are under private control, some religious and some independent. All are supported by the same array of funding sources, but to widely varying degrees. The amount contributed by each source is affected by a number of factors, including economic conditions and the perceptions of policymakers, benefactors, and students of whether investments in higher education, be they in the form of taxes, gifts, or tuition payments, are yielding expected benefits—either to the country or themselves.

- **In 1989, state and local appropriations were the largest source of funds for public institutions (56 percent) but a negligible source (1 percent) for private institutions.**
- **Private institutions depend primarily on tuition and fees as a source of revenue—57 percent in 1989.**
- **Among 2-year institutions, the dependence on the primary source of revenue is stronger than among 4-year institutions. Public 2-year colleges received 69 percent of their revenue from state appropriations in contrast to 53 percent for public 4-year institutions. Private 2-year colleges received 84 percent of their revenue from tuition in contrast to 56 percent for private 4-year institutions.**
- **In 1989, revenue from tuitions and fees for all colleges were more than 73 percent greater (in constant dollars) than in 1976. The share of revenue from tuition and fees was 32 percent, up from 27 percent in 1976. Revenue from state and local appropriations increased 25 percent (computed from supplemental table 50-2).**

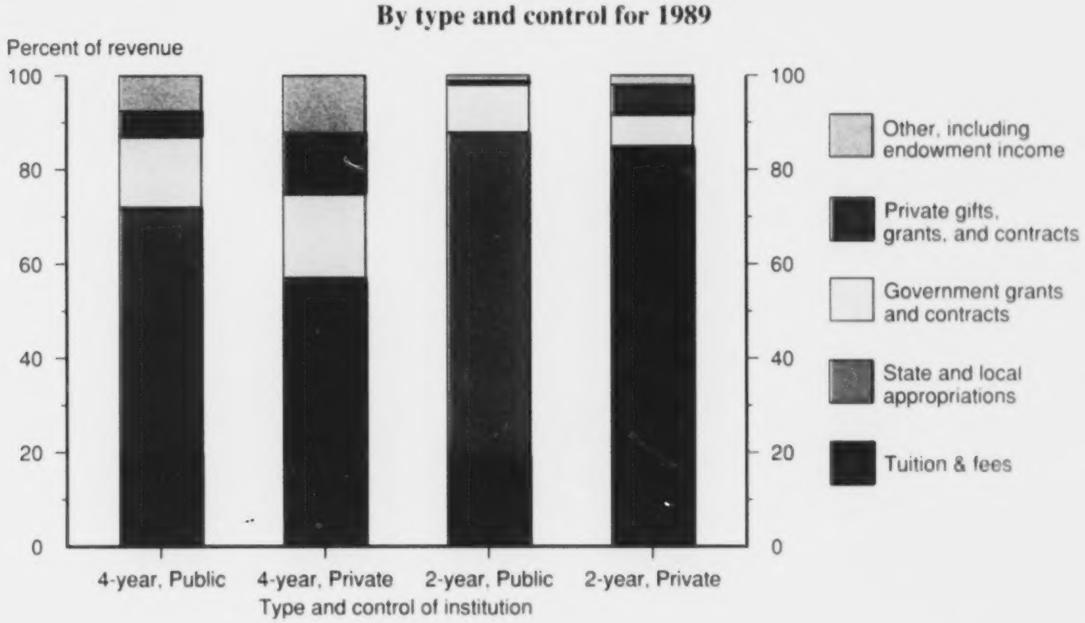
Percentage distribution of sources of general education revenue of higher education institutions, by type and control of institution: Fiscal year 1989

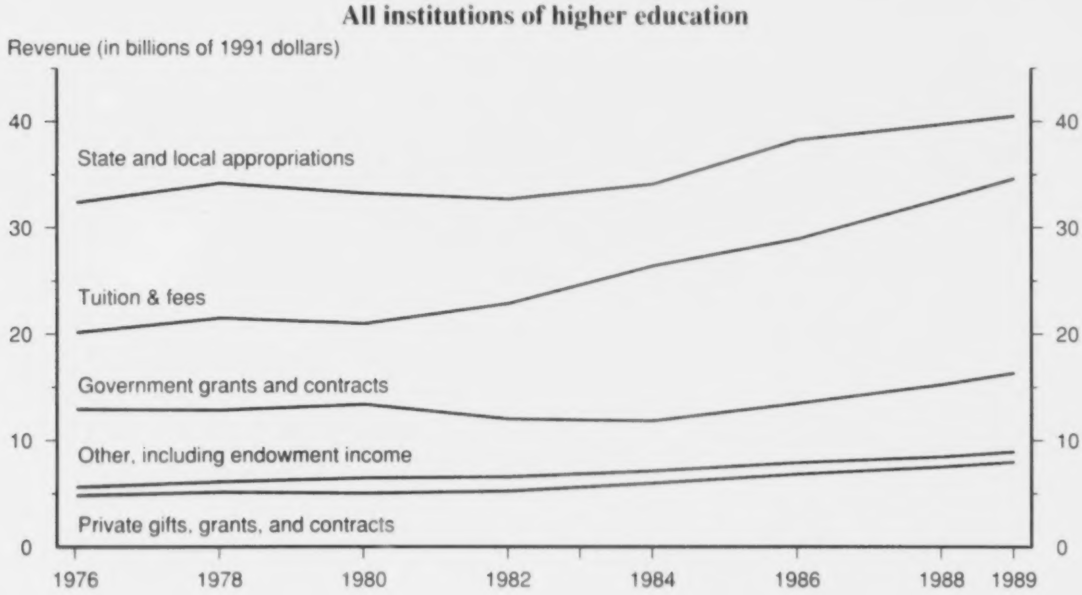
	Type of institution		
Revenue sources	All	4-year	2-year
		Public institutions	
Total	100.0	100.0	100.0
Tuition and fees	19.4	19.5	19.0
Federal appropriations	2.3	2.7	0.7
State & local appropriations	55.7	52.5	68.8
Federal grants & contracts	10.5	12.1	4.2
State & local grants & contracts	3.4	2.8	6.0
Private gifts, grants, contracts	4.6	5.6	0.8
Endowment income	0.7	0.8	0.1
Sales & services of educational activities	3.4	4.1	0.5
		Private institutions	
Total	100.0	100.0	100.0
Tuition and fees	56.9	55.9	84.3
Federal appropriations	0.7	0.7	0.1
State & local appropriations	1.1	1.1	0.7
Federal grants & contracts	13.7	14.1	3.5
State & local grants & contracts	3.6	3.6	3.1
Private gifts, grants, contracts	12.7	13.0	6.4
Endowment income	7.7	8.0	1.3
Sales & services of educational activities	3.5	3.6	0.7

NOTE: See note to table 50-1 for information on revenue sources excluded from the totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989 IPEDS Financial Statistics survey.

Sources of general education revenue for institutions of higher education, by type and control of institution: Selected fiscal years 1976 to 1989


By type and control for 1989


All institutions of higher education

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989 IPEDS Financial Statistics survey.

Growth of expenditures per student and tuition levels

- **At public universities, between 1981 and 1989, tuition charges increased by 30 percent (in constant dollars) while expenditures per full-time-equivalent (FTE) student for administration and research increased about the same amount and expenditures per FTE student for instruction increased 11 percent.**
- **At private universities during the same period, tuition charges increased 42 percent while expenditures for instruction increased 30 percent. Expenditures increased 42 percent for administration and 55 percent for institutionally based scholarships (supplemental table 50-2).**
- **Tuition charges increased less at public 2-year colleges than at other public institutions (supplemental table 50-3). Instructional expenditures at 2-year colleges increased about the same as at other public 4-year colleges, but less than at public universities (supplemental table 50-1).**

Rising college tuition is of considerable concern to policymakers, educators, students and their families. Why tuition continues to climb is a hotly debated subject. Information on where colleges and universities spend their money and how expenditure patterns have changed in relation to tuition informs the public debate.

Indices of selected expenditures per full-time-equivalent student and average undergraduate tuition charges (in constant dollars) at public and private universities: Academic years ending 1977–1989 (1981=100)

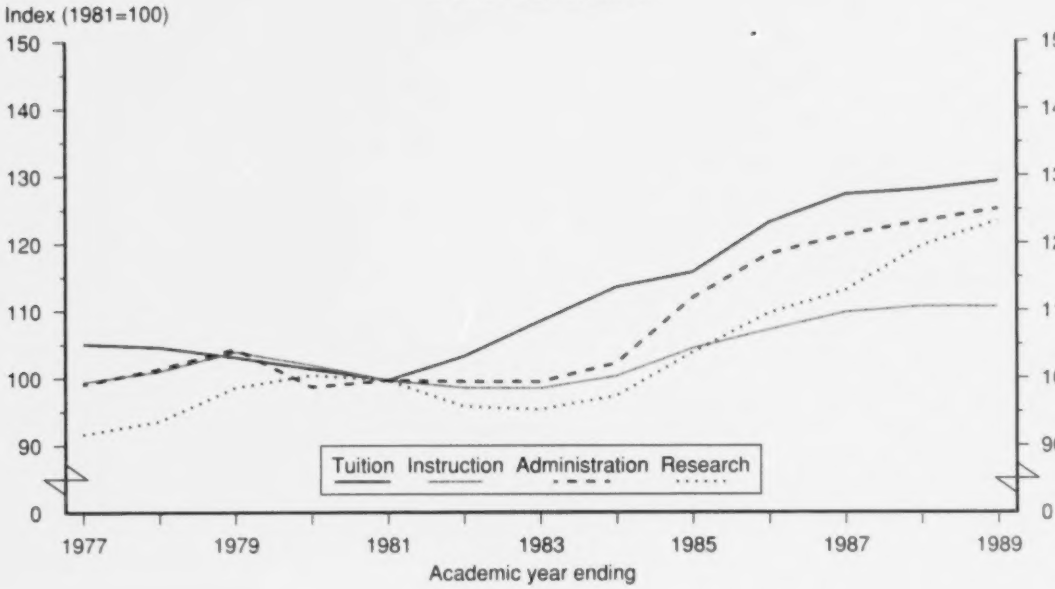
	Public universities					Private universities				
		Expenditures					Expenditures			
Academic year ending	Tuition charges	Total	Instruction	Administration	Research	Tuition charges	Total	Instruction	Administration	Research
1977	$105	$98	$100	$9	$92	$100	$98	$97	$93	$104
1978	105	99	101	102	94	99	97	96	93	101
1979	103	103	104	105	99	99	97	96	98	102
1980	102	102	102	99	101	99	99	98	101	102
1981	100	100	100	100	100	100	100	100	100	100
1982	104	98	99	100	96	104	99	102	98	95
1983	109	98	99	100	96	112	100	103	106	90
1984	114	100	101	103	98	118	108	109	118	96
1985	116	105	105	112	104	123	112	112	120	103
1986	123	110	107	119	110	127	117	116	126	109
1987	128	112	110	122	113	134	127	128	139	118
1988	128	115	111	124	120	140	129	127	140	122
1989	130	116	111	125	124	142	131	130	142	122

NOTE: The Higher Education Price Index is used to convert expenditures to constant dollars.

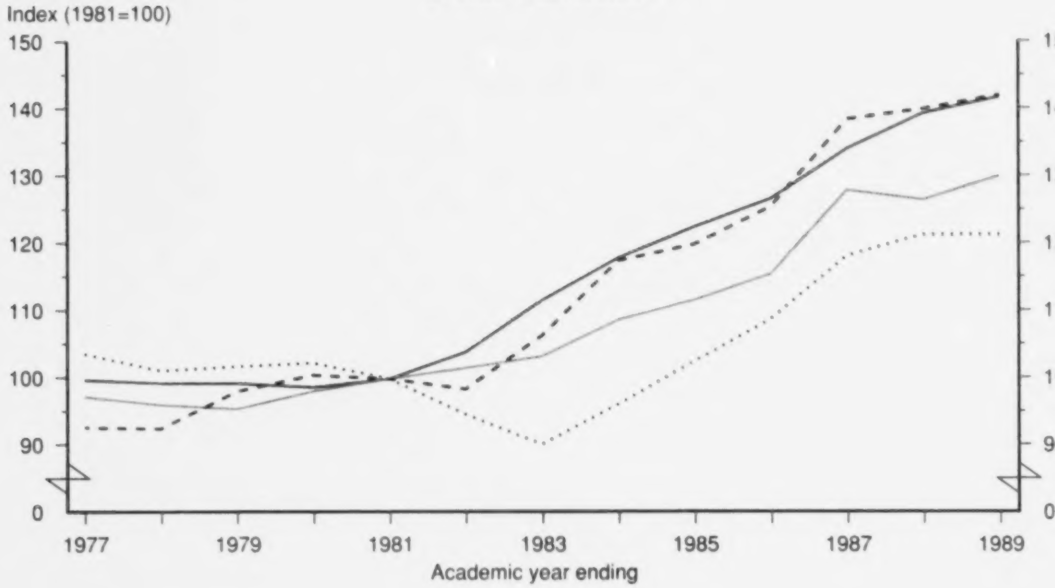
SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEIGS Institutional Characteristics, Financial Statistics, and Fall Enrollment surveys.

Indices of selected expenditures per full-time-equivalent student and average undergraduate tuition charges (in constant dollars) at public and private universities: Academic years ending 1977–1989

Public universities



Private universities



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEIGS Institutional Characteristics, Financial Statistics, and Fall Enrollment surveys.

Student financial aid among full-time undergraduates, by type and control of institution

Student financial aid is important to postsecondary institutions because it enhances their ability to serve students from all types of economic backgrounds. This indicator shows the proportion of full-time undergraduate students enrolled in different types of institutions in fall 1986 and fall 1989 who received aid from various sources.

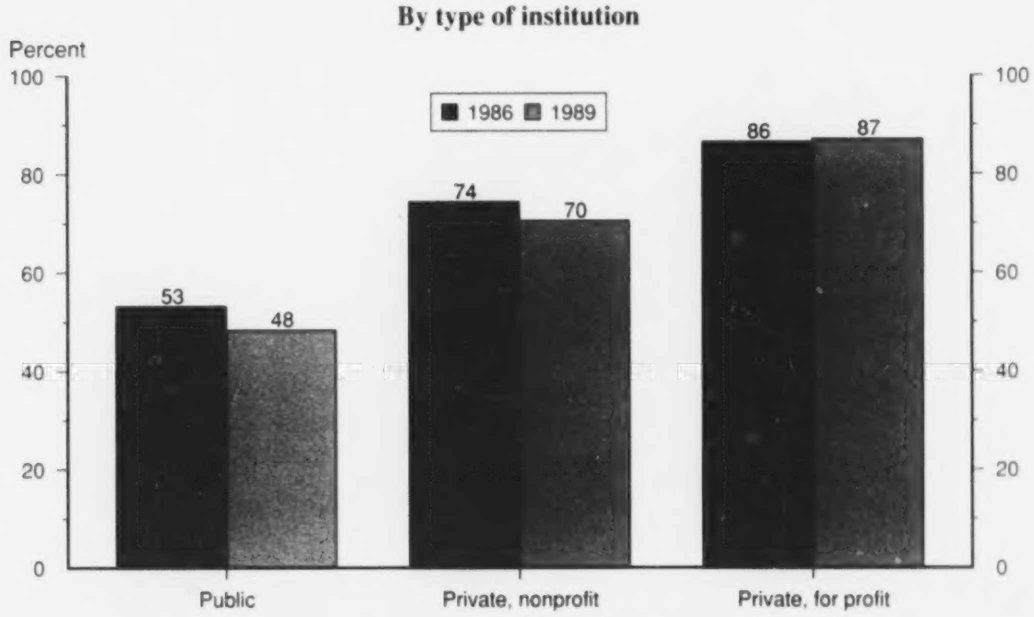
- **Almost 6 out of 10 undergraduates enrolled full time in the fall of 1989 received some form of student financial aid. The proportion receiving aid was higher in private institutions than in public institutions. In private, for-profit institutions, nearly 9 out of 10 students received aid.**
- **Federal aid was the most common source of aid, especially among those enrolled in private, for-profit institutions.**
- **Institutional aid was much more common among those enrolled in private, nonprofit institutions, where about half of the students received such aid, than it was among those enrolled other types of institutions.**
- **The proportion of full-time undergraduates receiving aid dropped between 1986 and 1989 in all but private, for-profit institutions. This was due to a decline in the proportion receiving federal aid.**

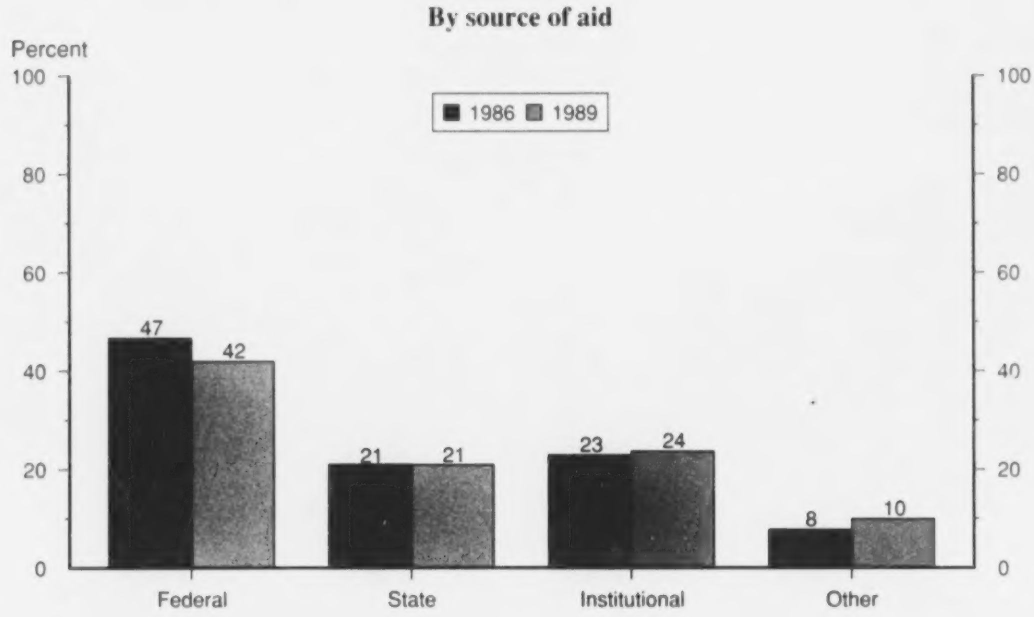
Percentage of full-time undergraduates receiving student financial aid, by type of institution and source of aid: Fall 1986 and 1989

Source of aid and fall of year	Total	Public	Private, nonprofit	Private, for-profit
Any aid				
1986	60.4	53.1	74.2	86.4
1989	56.4	48.3	70.4	87.0
Federal aid				
1986	46.6	39.9	55.5	82.0
1989	41.9	34.8	49.4	82.1
State aid				
1986	20.6	18.3	30.7	11.4
1989	21.1	19.1	30.6	12.2
Institutional aid				
1986	22.8	15.9	49.4	5.3
1989	23.6	15.9	49.7	18.2
Other aid				
1986	7.7	6.9	11.3	4.0
1989	9.9	9.0	14.7	5.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS), 1987 and 1990.

Percentage of full-time undergraduates receiving student financial aid, by type of institution and source of aid: Fall of 1986 and 1989





SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS), 1987 and 1990.

Staff employed in public schools

- **The number of full-time-equivalent public school staff per 100 students almost doubled between 1950 and 1981, and has increased slightly since then.**
- **Since 1950, classroom teachers as a percentage of total staff decreased sharply, from 70 to 53 percent. However, during the same time, the number of teachers per 100 students increased from 3.6 to 5.8.**
- **School district administrators as a percentage of full-time staff and the number of school district administrators per 100 students has remained fairly constant since 1950.**
- **The number of teacher aides, librarians, guidance counselors, and other instructional staff per 100 students has increased modestly, but as a percentage of total staff this group of other instructional staff has shown the largest increase of any group of staff.**
- **Support staff as a percentage of total staff increased about 8 percentage points between 1950 and 1990.**

Today's public school systems employ a large number of personnel other than teachers; from district-level administrators to building maintenance workers. Many factors may cause numbers and categories of staff to change over time.

Percentage distribution of full-time-equivalent staff employed in public schools, by type of staff; and full-time staff employed in public schools per 100 students: Selected school years ending 1950–1990

	Percentage distribution of full-time equivalent staff employed in public schools					Full-time equivalent staff per 100 students					
School year ending	Classroom teachers[1]	Principals and assistant principals	Other instructional staff[2]	School district administrators[3]	Support staff[4]	Total staff	Classroom teachers[1]	Principals and assistant principals	Other instructional staff[2]	School district administrators[3]	Support staff[4]
1950	70.3	3.3	0.5	2.6	23.3	5.2	3.6	0.2	0.0	0.1	1.2
1960	64.8	3.0	1.9	2.0	28.2	5.9	3.8	0.2	0.1	0.1	1.7
1970	60.1	2.7	5.3	1.9	30.0	7.4	4.4	0.2	0.4	0.1	2.2
1981	52.4	2.6	13.6	1.9	29.5	10.2	5.3	0.3	1.4	0.2	3.0
1985	53.4	3.1	9.8	1.6	32.1	10.4	5.5	0.3	1.0	0.2	3.3
1986	53.0	3.1	10.1	1.6	32.1	10.6	5.6	0.3	1.1	0.2	3.4
1987	53.0	3.1	10.6	1.8	31.6	10.6	5.6	0.3	1.1	0.2	3.4
1988	52.9	2.9	10.5	1.7	32.0	10.8	5.7	0.3	1.1	0.2	3.4
1989	53.8	2.9	11.1	1.6	30.5	10.7	5.8	0.3	1.2	0.2	3.3
1990[5]	53.3	2.9	11.4	1.6	30.8	10.9	5.8	0.3	1.2	0.2	3.4

[1] In 1950, includes a small number of teacher aides, librarians, guidance counselors, and psychological personnel. In 1960, includes a small number of teacher aides.

[2] Between 1960 and 1990, includes librarians and guidance counselors. Teacher aides were included from 1970 to 1990. Psychological personnel were included from 1950 to 1985. Since then, psychological personnel were included with support staff.

[3] Includes intermediate district staff, school district superintendents, assistants to superintendents, and supervisors of instruction.

[4] Includes secretarial and clerical personnel, transportation staff, food service, plant operation and maintenance, health, and recreational and other staff. Since 1985, includes psychological personnel.

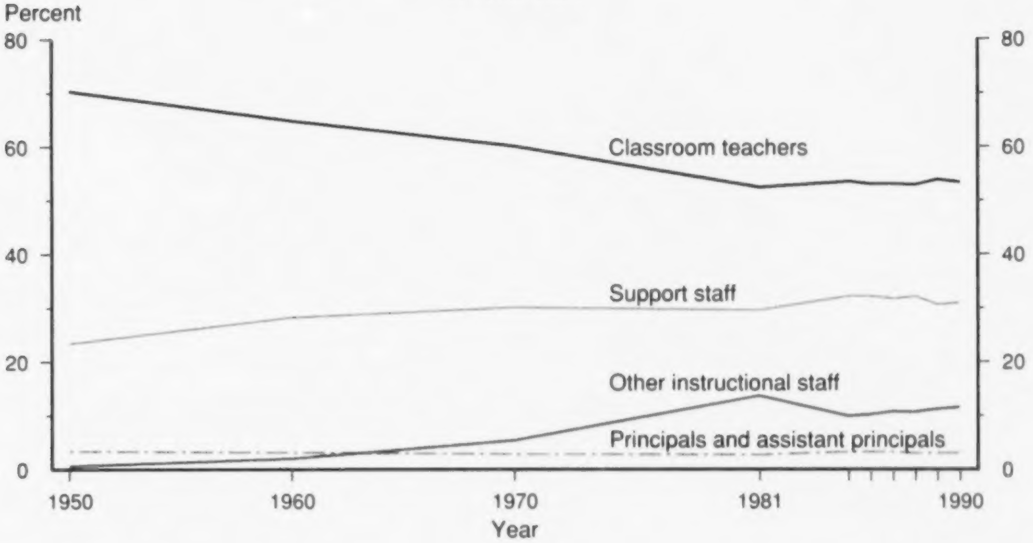
[5] Based on "Early Estimates" survey.

NOTE: Detail may not add to totals due to rounding.

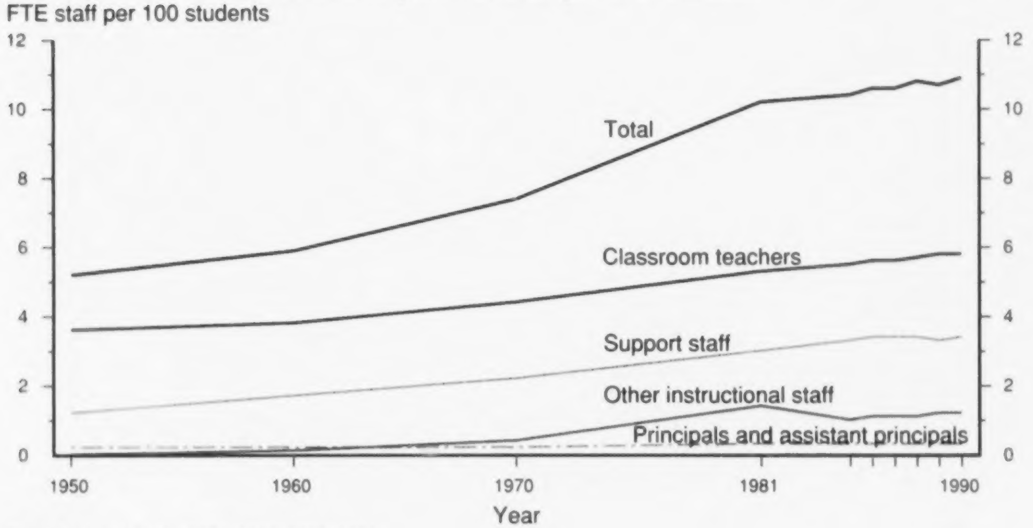
U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, Common Core of Data, and unpublished estimates, *Digest of Education Statistics, 1991*, tables 77 and 3.

Type of staff employed by public schools: Selected school years ending 1950–1990

Types of full-time-equivalent staff as a percentage of total staff



Full-time-equivalent staff per 100 students:



Plotted points include: 1950, 1960, 1970, 1981, 1985-1990

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, Common Core of Data, and unpublished estimates, *Digest of Education Statistics, 1991*, tables 77 and 3.

Staff employed in colleges and universities

- **Faculty and administrative staff changed little between 1977 and 1989 either as a percentage of FTE staff or in relation to the number of FTE students.**
- **Support professionals* made up a larger and nonprofessionals a smaller proportion of FTE staff in 1989 than in 1977.**
- **The number of FTE support professionals per 100 FTE students increased substantially between 1977 and 1989, whereas the staff to student ratio changed little for other occupations.**
- **With few exceptions, changes in the composition of higher education staff and in FTE staff per 100 FTE students were similar in 4-year and 2-year and in public and private institutions (supplemental tables 1 and 2).**

Changes in the composition of higher education staff and in the number of staff members per student provide information on changes in the allocation of resources within colleges and universities.

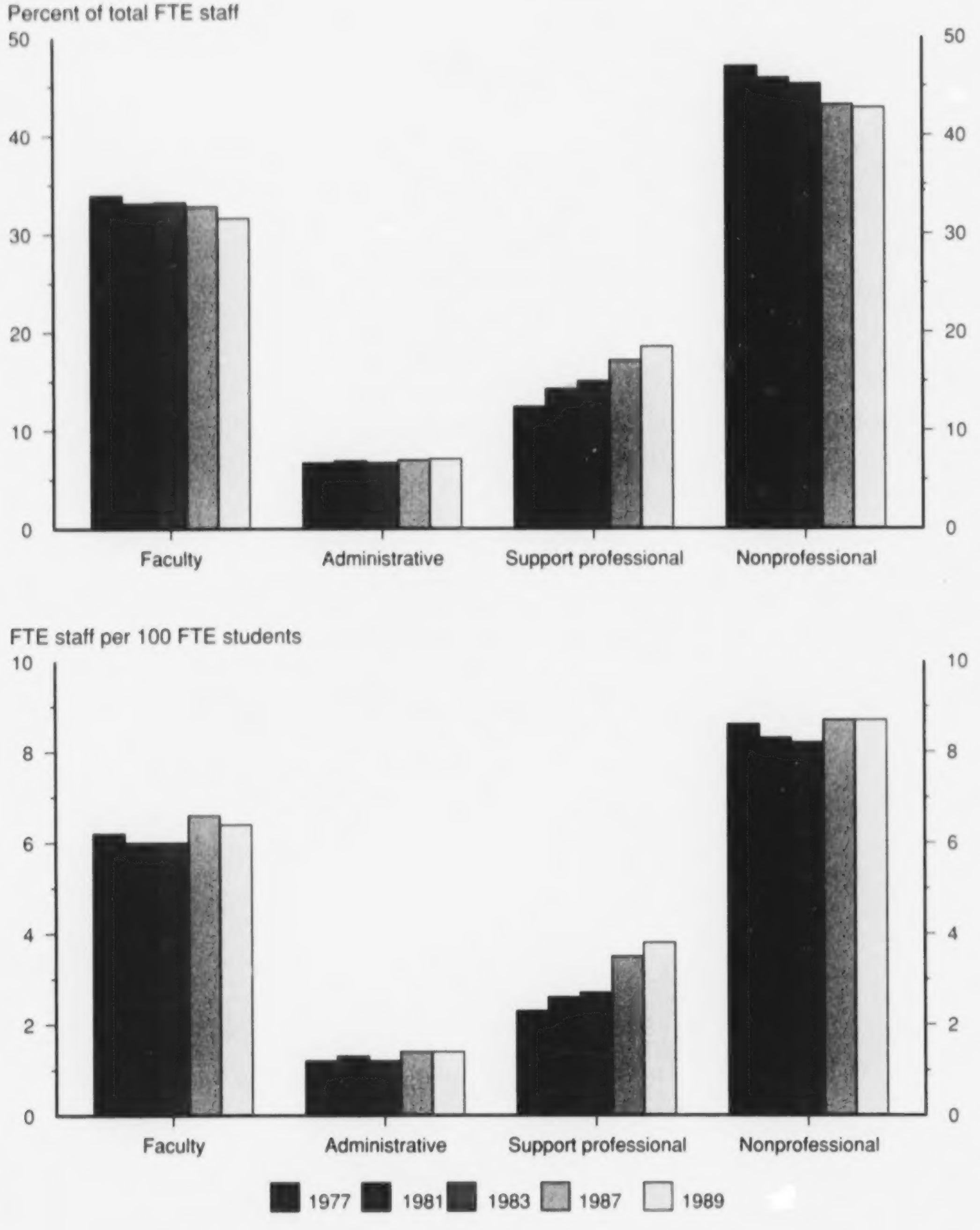
Percentage of total FTE staff and number of FTE staff per 100 FTE students, by occupation: 1977–89

Occupation	1977	1981	1983	1987	1989
Percent of total FTE staff					
Total	100.0	100.0	100.0	100.0	100.0
Faculty (instruction and research)	33.9	33.1	33.2	32.8	31.6
Administrative/executive/managerial	6.7	6.9	6.7	7.0	7.1
Support professional	12.4	14.2	15.0	17.1	18.5
Nonprofessional	47.0	45.8	45.2	43.1	42.8
Number of FTE staff per 100 FTE students					
Total	18.3	18.2	18.1	20.3	20.3
Faculty (instruction and research)	6.2	6.0	6.0	6.6	6.4
Administrative/executive/managerial	1.2	1.3	1.2	1.4	1.4
Support professional	2.3	2.6	2.7	3.5	3.8
Nonprofessional	8.6	8.3	8.2	8.7	8.7

*Support professionals are professionals employed for the primary purpose of performing academic support, student service, and institutional support activities. See supplemental note for a more detailed definition of this and other staff categories.

SOURCE: U.S. Equal Employment Opportunity Commission, Higher Education Staff Survey (EEO-6). U.S. Department of Education, National Center for Education Statistics, Fall Staff in Postsecondary Institutions Survey.

Percentage of FTE staff and FTE staff per 100 FTE students, by occupation: 1977–89



SOURCE: U.S. Equal Employment Opportunity Commission, Higher Education Staff Survey (EEO-6). U.S. Department of Education, National Center for Education Statistics, Fall Staff in Postsecondary Institutions Survey.

Salaries of teachers

- **Between 1980 and 1991, average overall teacher salaries adjusted for inflation increased by 25 percent, from $26,455 to $33,015; elementary teacher salaries increased by 26 percent, and secondary teacher salaries increased by 24 percent. These recent levels exceeded the highest levels seen previously in the early 1970s.**
- **Between 1980 and 1991, the average *beginning* salary for teachers increased from $19,342 to $22,830, or 18 percent.**
- **During the 1987–1988 school year, the overall average base salary for public school teachers was 58 percent higher than that for private school teachers.**
- **In both the public and private sectors, average salaries of teachers in urban and suburban schools exceeded those of teachers in rural schools (supplemental tables 3 and 4).**
- **On average, teachers in schools with 750 or more students earned a higher average salary than those in smaller schools (supplemental tables 3 and 4).**

There has been much discussion about increasing the supply and quality of teachers. Education officials are experimenting with teacher salary structures, creating new career steps, career ladders, merit pay schemes, and new positions with greater authority and responsibility. In the past, such experiments have been associated with increases in teachers' salaries.

Average annual salary (in constant 1991 dollars) for public elementary and secondary school teachers: Selected years 1960–1991

School year ending	All teachers	Elementary teachers	Secondary teachers	Beginning teacher salary
1960	$23,034	$22,204	$24,330	—
1964	26,397	25,561	27,591	—
1968	29,116	28,273	30,171	—
1972	31,692	30,775	32,757	$22,761
1976	30,227	29,459	31,035	21,794
1980	26,455	25,791	27,265	19,342
1984	28,817	28,229	29,631	20,340
1988	32,334	31,720	33,240	22,582
1991	33,015	32,448	33,701	22,830

— Not available.

Average base salary (in current 1987-1988 dollars) for full-time teachers, by urbanicity, level, and control of school: 1987–1988

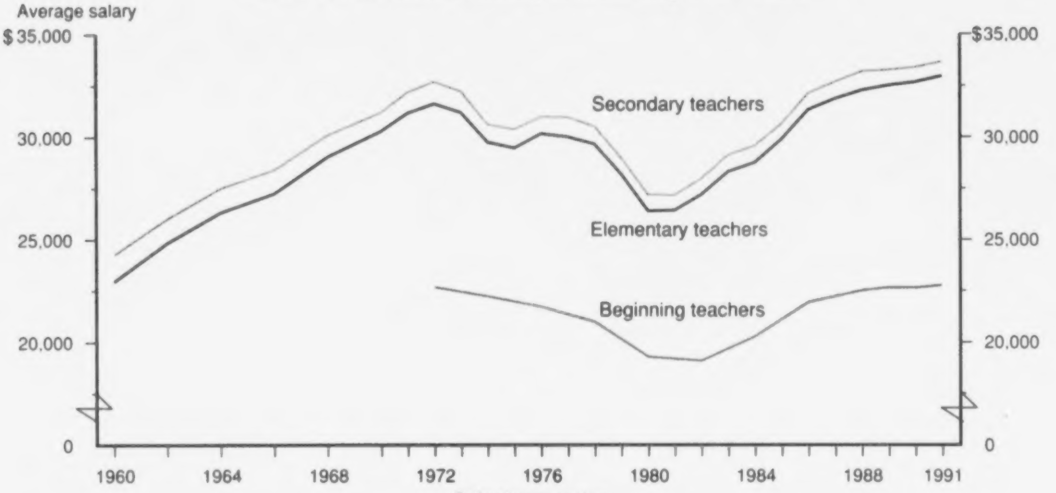
		Urban		Suburban		Rural	
Control	Total	Elementary	Secondary	Elementary	Secondary	Elementary	Secondary
Public	$26,230	$27,292	$28,839	$28,526	$30,116	$23,719	$24,751
Private	16,562	15,603	18,886	15,471	20,835	13,304	17,553

NOTE: Base salary does not include other school year compensation, summer supplemental and non-school income.

SOURCE: National Education Association, *Estimates of School Statistics, 1991*, copyright 1991 by NEA; American Federation of Teachers, *Survey and Analysis of Salary Trends 1991*, 1991; U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88, 1991.

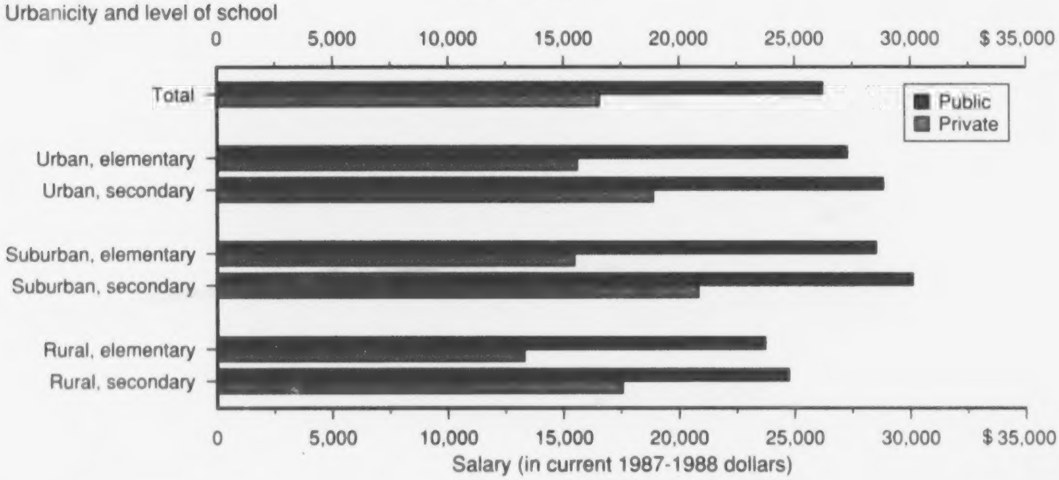
Average salaries of teachers

Average annual salary and average beginning salary for public school teachers (in constant 1991 dollars): Selected school years ending 1960-1991



Plotted points for average annual salary for teachers are: even years 1960-1968, and all years 1970-1991
Plotted points for average beginning salary for teachers are: even years 1972-1988, and 1989, 1990, and 1991

Average base salary for full-time teachers, by urbanicity, level, and control of school: 1987-1988



SOURCE: National Education Association, *Estimates of School Statistics, 1991*, copyright 1991 by NEA; American Federation of Teachers, *Survey and Analysis of Salary Trends 1991*, 1991; U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-88, 1991.

Salaries of full-time college faculty

- **After adjusting for inflation, the salaries of full-time faculty fell substantially during most of the 1970s but generally rose during the 1980s.**
- **Despite increases during 1980s, the purchasing power of faculty salaries in 1990 was lower than in the early 1970s.**
- **The pattern of decline during the 1970s followed by growth in the 1980s held for all professorial ranks at both public and private 4-year and 2-year institutions, except for associate professors at 2-year private institutions. The salaries for the latter group remained generally flat during the 1980s.**

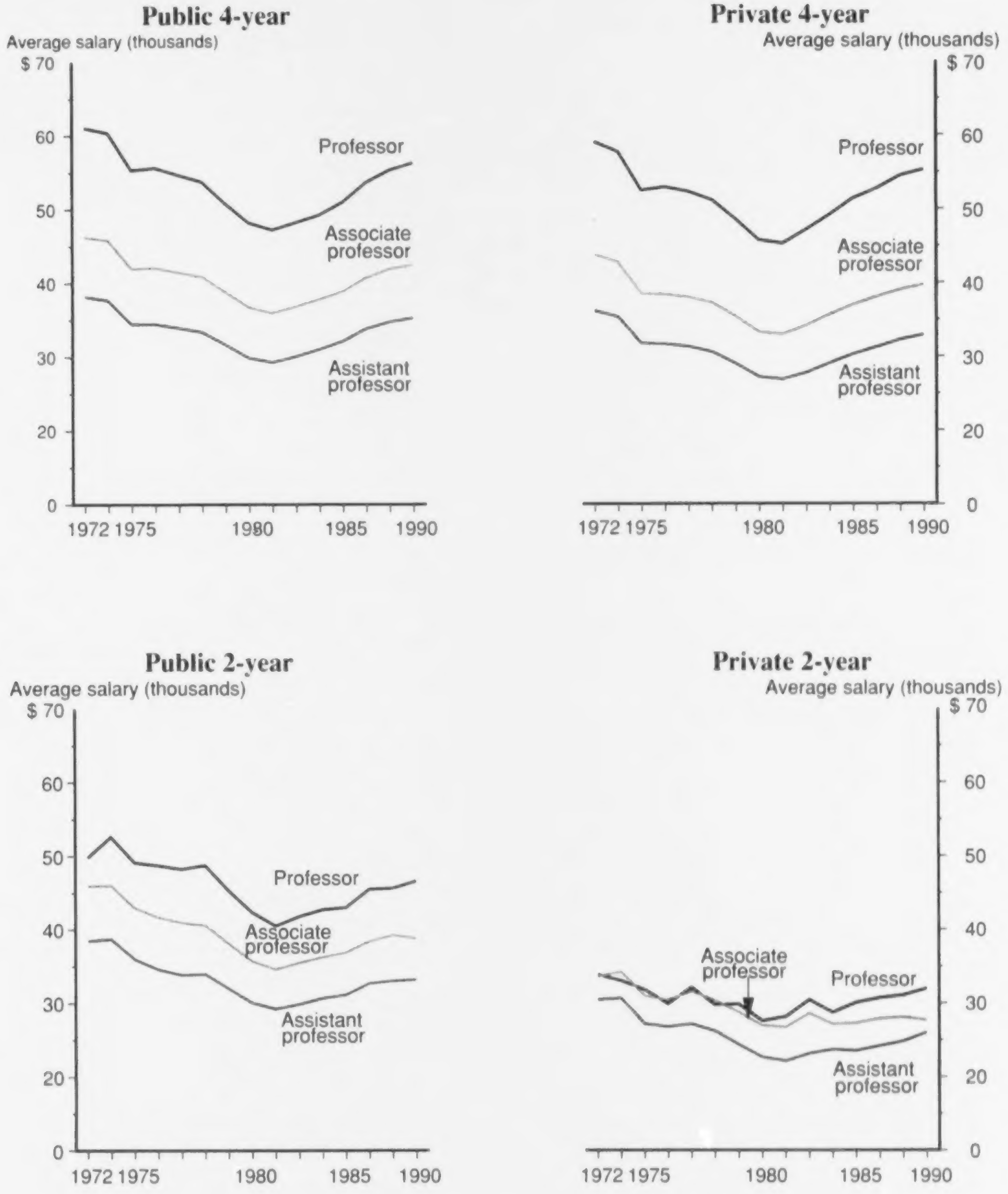
Faculty salaries affect higher education's ability to attract and retain qualified instructional personnel. In addition, they are a significant component of college and university expenditures.

Average salaries in 1991 dollars of full-time faculty: Selected academic years ending 1972–90

Type of institution and year	Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
4-year institutions						
1972	61,059	46,216	38,137	58,957	43,723	36,083
1975	55,306	41,930	34,401	52,458	38,391	31,653
1980	48,151	36,663	29,770	45,648	33,176	27,083
1985	50,966	38,812	32,079	51,263	36,851	30,138
1990	56,250	42,440	35,238	55,205	39,601	32,781
2-year institutions						
1972	49,692	45,829	38,360	33,687	33,452	30,308
1975	48,998	42,848	35,866	31,664	30,852	27,034
1980	42,219	35,571	29,917	27,423	26,806	22,504
1985	42,884	36,709	31,046	29,914	27,118	23,393
1990	46,471	38,685	33,091	31,820	27,536	25,888

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of faculty salaries, various years.

Average salaries in 1991 dollars of full-time faculty in institutions of higher education, by academic rank and type and control of institution: Academic years ending 1972–1990



SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of faculty salaries, various years.

Sources of supply of newly hired teachers

- **Substantially fewer private than public school teachers new to their jobs in the 1987-88 school year came directly from other teaching positions.**
- **A greater proportion of private than public school new hires had no prior teaching experience.**
- **The greatest proportion of first-time teachers were hired directly out of college.**
- **Among those new to the profession, private school teachers were much more likely than public school teachers to have been working outside the field of education just before taking their current jobs.**
- **A sizeable proportion of teachers reentering the teaching profession had been at home just prior to their current job: 25 percent of public and 29 percent of private school reentrants.**

Schools seeking new teachers need information about the source and teaching experience of potential recruits. This indicator provides data on this subject by examining the activities of newly hired teachers the year before their current teaching jobs.

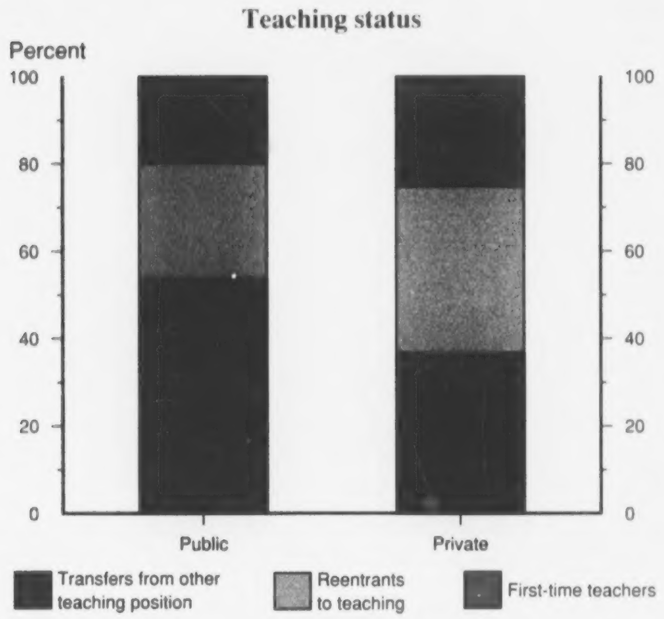
Percentage distribution of teaching status and source of first-time and reentering teachers, by sector: 1987-88

Teaching status and source	Public	Private
Teaching status		
Total	100.0	100.0
First-time teacher	19.8	25.2
Reentrant to teaching	26.3	38.1
Transfer from other teaching position	53.9	36.7
Source of first-time and reentering teachers		
First-time teachers		
Total	100.0	100.0
Working in education	10.9	8.3
Working outside education	15.3	28.1
Attending college	61.8	48.2
Homemaking/child rearing	4.6	9.9
Other	7.4	5.5
Reentering teachers		
Total	100.0	100.0
Working in education	19.7	12.3
Working outside education	22.1	24.9
Attending college	22.3	19.1
Homemaking/child rearing	24.5	28.7
Other	11.4	14.9

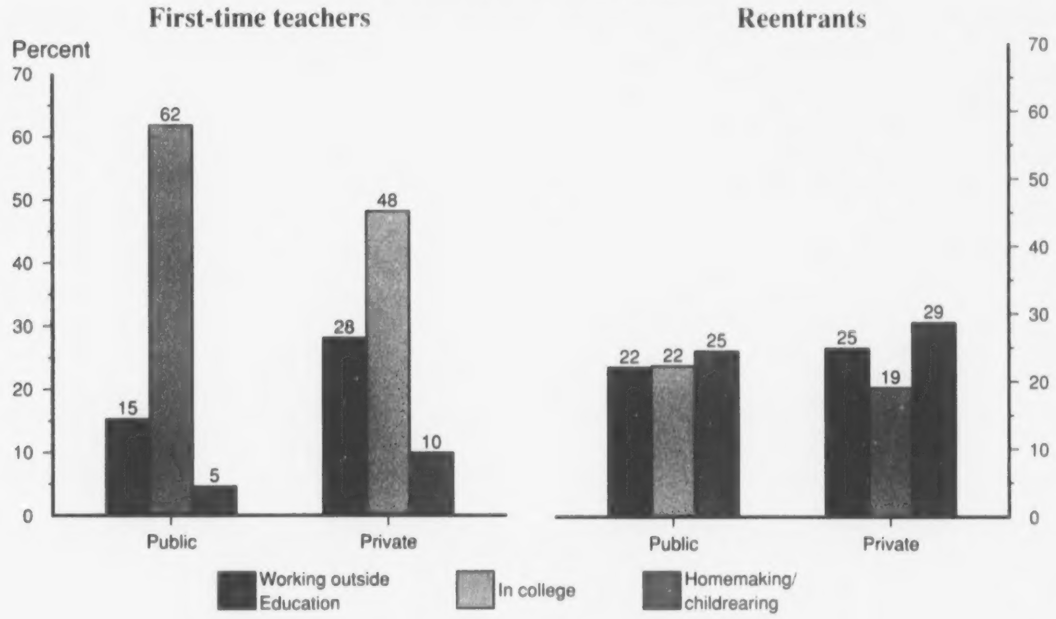
NOTE: Newly hired teachers are those hired in the 1987-88 school year. Source of teachers refers to teachers' main activity in the year before the current job.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey, teacher questionnaire.

Teaching status and source of teachers newly hired in 1987–88



Source of first-time and reentering teachers



SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey, teacher questionnaire.

Attrition among full-time public and private school teachers

- **The rate of attrition from the teaching profession between the 1987-88 and 1988-89 school years was higher among private than among public school full-time teachers at both the elementary and secondary levels.**
- **The attrition rate did not vary by primary assignment field among public secondary school teachers (supplemental table 58-1).**
- **At both the elementary and secondary levels, private school leavers were substantially more likely than public school leavers to have taken jobs outside education and less likely to have retired.**
- **A substantial proportion of public school leavers retired: over 3 out of 10 elementary and 2 out of 10 secondary school teachers.**
- **About 2 out of 10 public secondary school leavers moved from a teaching to a nonteaching position within the field of education.**

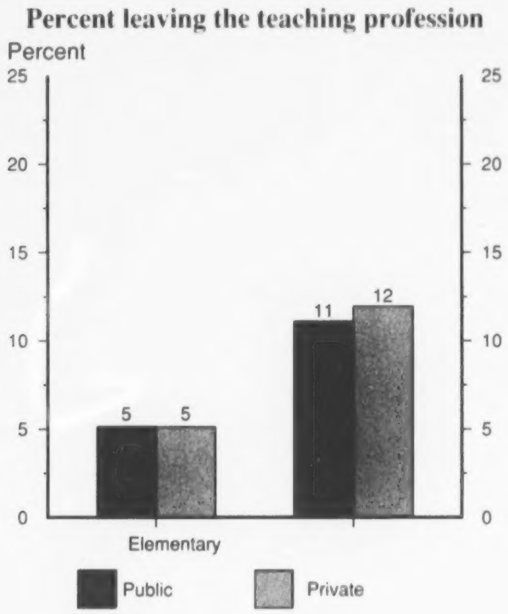
Data on teacher attrition and the destinations of teachers leaving the profession provide insights into the dynamics of the teacher workforce, improving understanding of the supply of experienced teaching personnel.

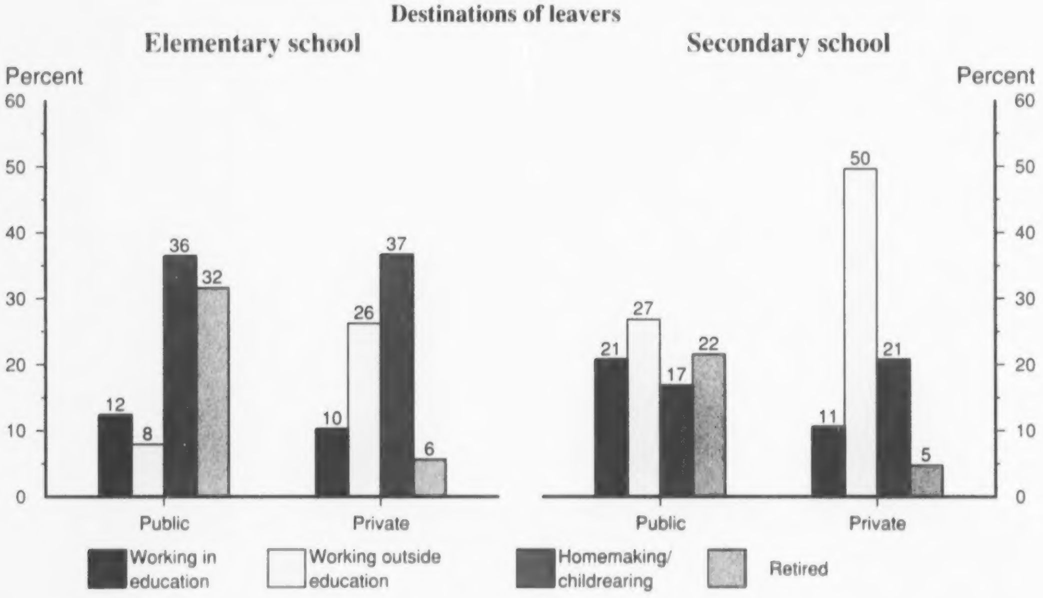
Change in teaching status of full-time teachers between the 1987–88 and 1988–89 school years and destination of leavers, by school level and sector

Change in teaching status and destination	Public		Private	
	Elementary	Secondary	Elementary	Secondary
Change in teaching status				
Total	100.0	100.0	100.0	100.0
Stayers	85.4	88.8	77.3	79.6
Movers	9.3	6.0	11.6	8.5
Leavers	5.3	5.2	11.1	11.9
Destination of leavers				
Total	100.0	100.0	100.0	100.0
Working in education	12.3	20.7	10.2	10.5
Working outside education	7.9	26.8	26.2	49.6
Attending college	4.7	6.5	5.6	8.2
Homemaking/childrearing	36.4	16.8	36.6	20.7
Retired	31.6	21.5	5.6	4.7
Disabled	0.7	0.9	0.5	0.3
Other	6.4	6.7	15.3	6.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey and 1988-89 Teacher Followup Survey.

Percentage of full-time teachers leaving the profession between the 1987-88 and 1988-89 school years and destination of leavers, by school level and sector





SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey and 1988-89 Teacher Followup Survey.

New doctorate recipients taking jobs in higher education, by field of study

- **The proportion of new doctorate recipients with definite employment commitments who took jobs in higher education* declined substantially between the early 1970s and the early 1980s. Since then, the proportion has remained generally stable.**
- **This pattern of decline followed by stability was true in all fields except engineering and mathematics. The largest declines occurred in the social and behavioral sciences and in education.**

The infusion of new talent into a profession is important to its intellectual vitality and growth. Trend data on the proportion of new doctoral recipients in different fields who take jobs in colleges and universities shed light on how higher education's teaching profession has fared in this area over time.

- **The proportion of new mathematics doctorates taking jobs in higher education rose during most of the 1980s. These increases compensated for losses experienced during the 1970s.**
- **Except for engineering and mathematics, the proportion of new doctorates taking jobs in colleges and universities was substantially lower in 1990 than it had been in 1970.**

Percentage of new doctorate recipients with definite employment plans in the United States who had job commitments at colleges and universities, by field of study: Selected years of doctorate 1970–90

Year of doctorate	All fields	Humanities	Social/ behavioral sciences	Life sciences	Physical sciences	Mathematics	Engineering	Education
1970	68.1	96.1	80.3	70.9	38.2	80.3	28.6	70.9
1972	67.7	94.0	76.6	68.8	45.5	78.7	27.0	63.5
1974	62.6	91.0	71.2	66.0	32.3	77.1	21.1	58.5
1976	60.5	90.0	66.0	61.7	31.6	77.8	27.0	54.7
1978	56.9	85.3	61.3	61.4	24.9	71.4	25.6	52.5
1980	52.6	80.7	54.6	53.8	20.1	72.1	26.5	50.0
1982	50.3	82.7	52.5	50.3	19.2	74.6	26.2	45.9
1984	50.7	81.9	50.2	45.1	22.5	79.4	31.7	43.9
1986	50.3	80.4	48.9	45.8	20.6	76.5	32.6	45.0
1988	51.9	82.7	50.9	49.8	23.3	81.5	32.8	44.4
1990	51.9	84.9	52.8	47.1	20.8	81.1	26.0	46.8

NOTE: Computer science and other technical/professional fields are included in the total but are not shown.

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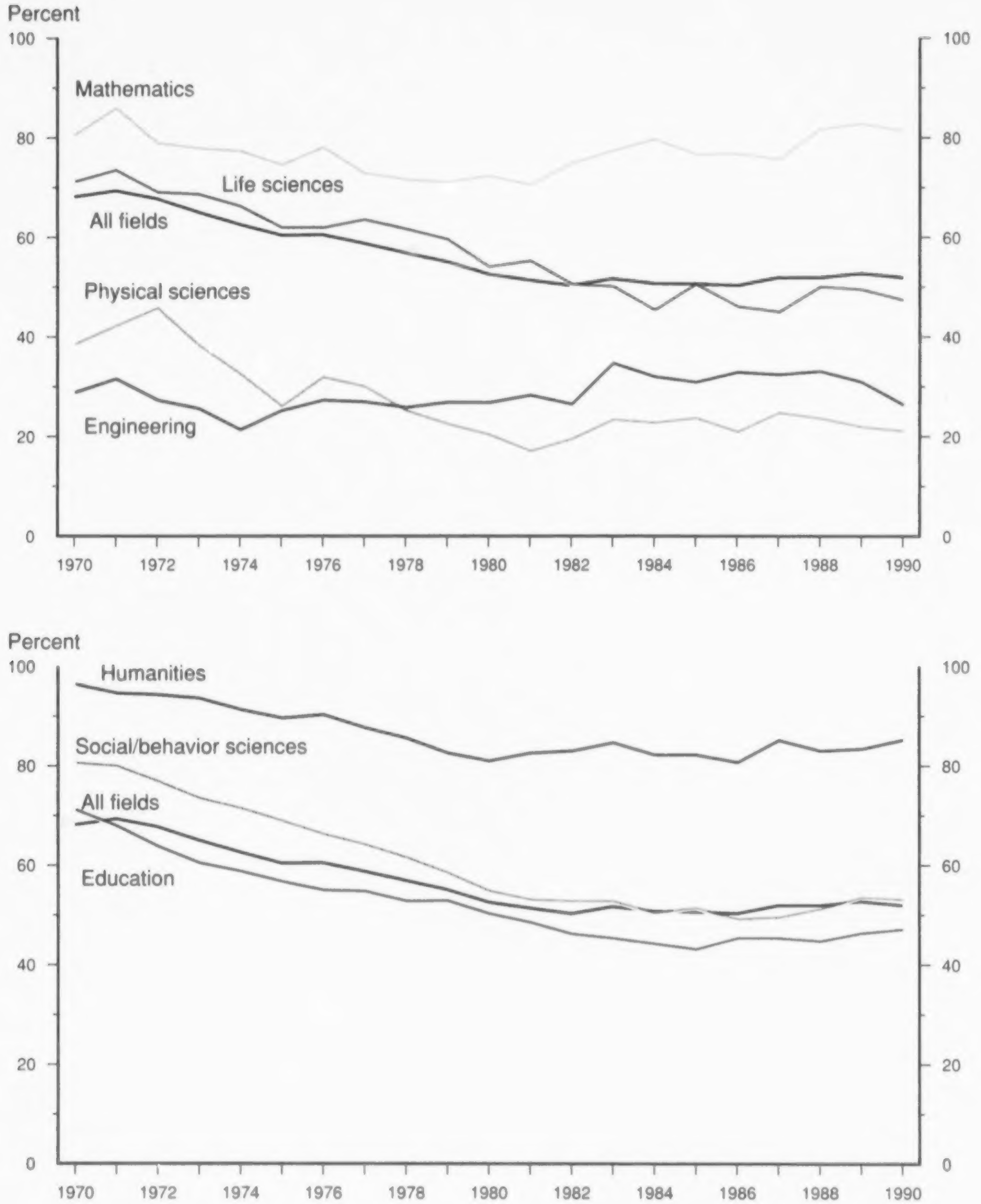
* This indicator pertains only to definite employment committments in the United States. A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc. Jobs in higher education include those in teaching, research, and administration but not postdoctoral fellowships.

SOURCE: National Research Council, Doctorate Records File, Survey of Earned Doctorates, unpublished tabulations.

Percentage of new doctorate recipients with definite employment plans in the United States who had job commitments in higher education, by field of study: Years of doctorate 1970–1990



SOURCE: National Research Council, Doctorate Records File, Survey of Earned Doctorates.

Age of doctorate holders employed in colleges and universities, by field

- **Between 1977 and 1989, the proportion of doctorate holders employed in 4-year colleges and universities who were aged 55 or older increased significantly in all fields except the computer sciences. Increases were greatest in the physical sciences, mathematics, and engineering.**
- **In 1989, the proportion of doctorate holders aged 55 or older was higher among those employed in academic settings than among those with nonacademic jobs in all fields except the computer sciences. This was a change from 1977 when there were no significant age differences between the two employed groups, except among engineers.**

Data showing changes in the proportion of academically employed doctorate holders aged 55 or older provide information about the aging of the academic labor force. They can alert policymakers and administrators to problems that might result, such as faculty shortages, should large numbers of faculty decide to retire in the near future.

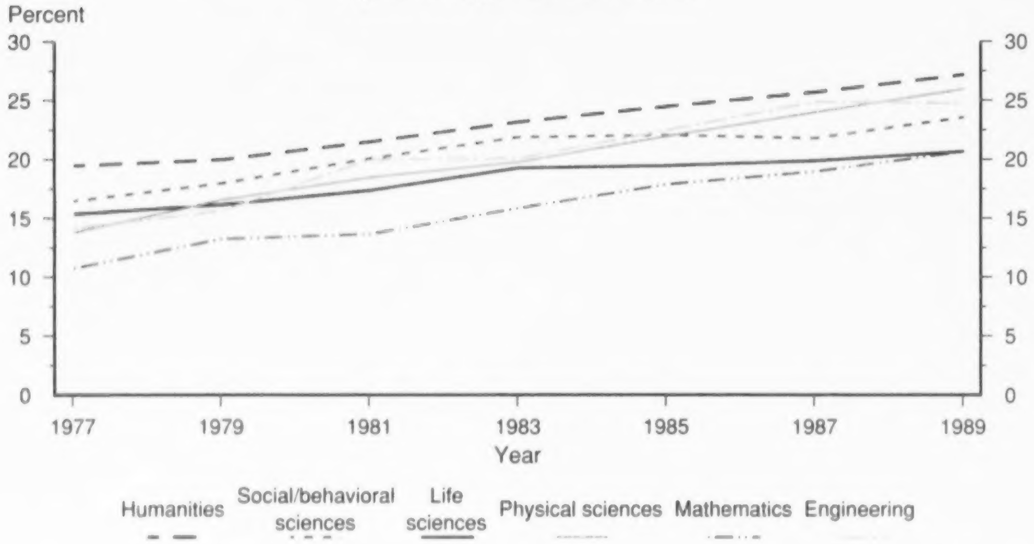
Percentage of doctorate holders aged 55 or older, by type of employer and field of study: Selected years 1977–1990

Type of employer and field	1977	1979	1981	1983	1985	1987	1989
4-year colleges and universities							
Humanities	20	20	21	23	24	26	27
Social and behavioral sciences	17	18	20	22	22	22	24
Life sciences	15	16	17	19	19	20	21
Physical sciences	14	17	19	20	22	24	26
Mathematics	11	13	14	16	18	19	21
Computer sciences	6	9	13	14	12	13	13
Engineering	14	16	20	20	23	25	25
Other employers							
Humanities	18	16	15	13	15	16	18
Social and behavioral sciences	17	16	17	17	18	18	18
Life sciences	16	17	17	17	17	16	16
Physical sciences	15	16	18	18	19	17	19
Mathematics	9	18	14	14	16	14	12
Computer sciences	5	5	6	7	6	9	11
Engineering	10	12	12	13	14	15	18

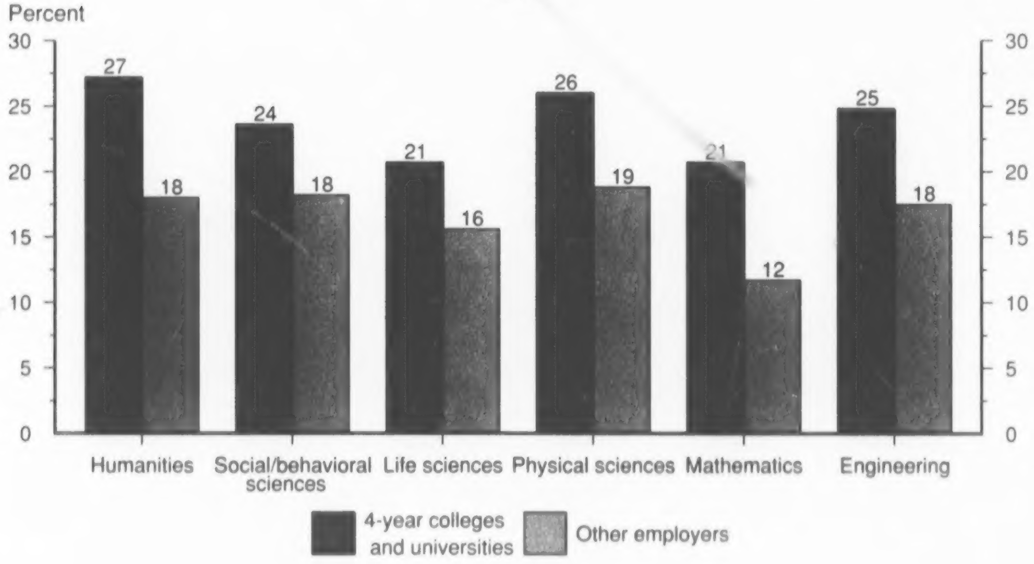
SOURCE: National Research Council, Survey of Doctorate Recipients, various years.

Percentage of doctorate holders aged 55 or older, by field of study and type of employer: Selected years 1977–1989

By field of study:
4-year colleges and universities



By type of employer and field of study:
1989



SOURCE: National Research Council, Survey of Doctorate Recipients, various years.

Supplemental Tables and Notes

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Table 1-1 Percentage enrolled in school, by age: October 1972–1990

October	Age															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1972	15.8	34.0	85.7	98.5	99.6	99.9	99.8	100.0	99.8	99.9	99.8	98.6	97.7	93.8	85.6	57.5
1973	14.8	35.1	86.8	98.9	99.7	99.7	99.8	99.7	99.9	99.8	99.7	98.6	97.1	93.2	84.5	52.2
1974	20.0	38.3	89.9	99.1	99.7	99.8	99.8	99.8	100.0	100.0	99.9	98.8	97.6	93.7	82.9	53.2
1975	22.1	41.5	90.9	99.4	99.9	99.8	100.0	99.9	99.8	99.8	99.6	98.9	98.1	94.3	84.3	56.2
1976	20.8	42.7	92.3	99.5	99.8	99.8	99.9	99.9	99.8	99.8	99.9	98.8	98.2	93.3	86.2	53.0
1977	22.0	43.2	92.4	99.5	99.9	99.9	99.9	99.9	99.8	99.7	99.0	100.0	98.3	93.9	84.9	56.9
1978	25.7	44.7	92.1	99.1	99.6	99.8	99.9	99.4	99.6	99.6	99.6	99.3	98.4	94.7	85.0	52.4
1979	25.4	46.1	93.0	99.2	99.4	99.6	99.9	99.8	99.8	99.5	99.9	99.1	98.0	94.4	85.3	55.9
1980	27.6	47.2	93.2	99.4	99.5	99.5	99.7	99.6	99.7	99.8	99.7	98.7	98.5	93.9	85.2	54.6
1981	27.6	45.4	90.2	98.9	99.6	99.7	99.7	99.9	99.7	99.6	99.9	99.0	97.7	94.6	87.3	57.9
1982	27.6	46.1	91.5	99.4	99.8	99.6	99.8	99.9	99.8	99.9	99.5	98.8	98.9	94.6	88.1	57.1
1983	28.2	47.6	92.6	99.0	99.5	99.7	99.6	99.8	99.7	99.9	99.7	99.0	98.5	96.3	88.6	58.4
1984	28.5	46.5	91.4	99.1	99.6	99.2	99.4	99.7	99.7	99.6	99.7	98.3	97.8	95.3	88.5	58.6
1985	29.2	49.5	93.9	99.1	99.6	99.8	99.7	99.7	99.8	99.9	99.7	98.4	98.5	94.9	88.6	59.7
1986	29.3	49.5	91.8	99.4	99.8	99.8	99.8	99.8	99.5	99.7	99.8	98.2	97.9	95.5	89.6	61.0
1987	28.6	47.9	91.3	99.0	99.5	99.7	99.6	99.4	99.5	99.7	99.3	98.9	98.2	95.4	88.1	62.2
1988	27.6	49.2	92.6	99.3	99.7	99.6	99.6	99.9	99.6	99.6	99.7	99.3	98.5	94.6	88.8	62.8
1989	27.1	51.2	91.8	98.4	98.9	99.4	99.4	99.4	99.5	99.2	99.6	99.5	98.2	96.0	89.6	61.6
1990	32.6	56.1	93.2	99.8	99.5	99.9	99.6	99.6	99.6	99.7	99.6	99.6	98.4	95.6	89.5	64.4

October	Age															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1972	42.7	37.8	31.2	20.5	16.9	15.2	13.8	11.9	9.9	8.4	9.1	7.1	6.8	6.7	5.9	5.6
1973	40.2	33.4	30.2	19.0	14.4	15.5	12.6	11.1	9.5	9.9	6.1	6.5	5.3	5.6	4.7	4.7
1974	39.4	33.4	31.6	20.1	15.9	13.8	14.0	11.5	10.6	11.0	7.7	7.7	7.0	7.0	7.4	6.5
1975	42.9	36.5	31.6	21.9	17.8	14.5	14.2	12.2	10.8	11.4	9.4	9.6	7.5	7.9	7.9	6.7
1976	44.8	37.1	30.9	22.3	16.7	16.1	13.4	12.4	11.5	10.2	9.7	8.1	8.2	7.7	6.7	5.4
1977	41.8	37.1	32.9	21.8	17.6	15.4	15.2	12.9	10.7	11.7	10.9	9.7	9.0	8.1	6.5	6.7
1978	42.7	33.7	28.6	21.9	16.2	14.7	11.8	11.0	10.0	9.4	8.6	8.9	7.9	7.1	5.7	4.2
1979	41.3	35.1	30.0	21.1	17.3	13.7	13.5	12.4	9.8	10.3	9.0	9.0	7.0	8.1	7.2	5.6
1980	43.0	33.9	30.6	22.3	16.7	13.5	12.0	11.2	10.0	8.8	7.9	8.0	8.2	6.5	6.8	6.3
1981	43.4	36.5	29.7	21.9	16.4	14.2	11.6	10.7	9.2	9.3	8.1	8.7	8.3	8.0	6.7	6.2
1982	43.4	38.9	32.7	22.2	17.2	13.8	12.6	11.4	9.4	9.2	9.5	7.4	8.1	7.0	6.3	6.1
1983	46.6	35.8	32.5	24.1	16.4	13.4	13.0	11.1	9.9	8.6	9.1	8.6	7.7	7.7	6.9	5.8
1984	43.1	37.7	31.4	22.5	17.2	13.8	11.4	9.9	10.4	8.8	7.8	6.9	8.0	7.1	5.8	6.0
1985	45.7	38.3	33.8	22.4	15.7	13.4	12.0	10.3	9.6	9.7	9.1	7.9	7.2	6.3	6.7	6.4
1986	49.6	36.8	30.6	25.4	16.4	13.8	11.3	10.4	10.2	9.3	7.8	7.6	7.6	6.8	6.3	5.5
1987	48.8	42.3	34.9	23.2	17.2	12.7	12.7	9.7	8.6	7.3	7.1	6.6	5.5	6.2	5.6	5.3
1988	47.8	42.1	36.0	25.4	17.1	13.2	10.1	9.4	7.9	7.5	6.8	6.4	6.0	6.0	6.2	5.1
1989	50.6	39.0	38.0	27.9	18.5	14.2	12.6	10.2	9.3	7.9	6.9	6.7	6.3	4.9	5.2	5.4
1990	50.6	42.9	36.4	28.1	19.2	16.2	11.8	11.7	9.7	8.7	6.9	6.5	7.6	5.5	4.2	5.4

NOTE: School enrollment includes nursery schools, regular elementary and secondary schools, and colleges and universities. It excludes attendance at day-care centers and less than 2-year colleges and other postsecondary institutions.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 1-2 Standard errors of estimated percentages in table 1-1

October	Age															
	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1972	0.9	1.2	0.9	0.3	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.3	0.3	0.5	0.8	1.1
1973	0.9	1.2	0.8	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.6	0.8	1.1
1974	1.0	1.2	0.7	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.5	0.8	1.1
1975	1.1	1.2	0.7	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.8	1.1
1976	1.1	1.2	0.6	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.6	0.8	1.1
1977	1.1	1.3	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.3	0.5	0.8	1.1
1978	1.1	1.3	0.7	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.5	0.8	1.1
1979	1.1	1.3	0.7	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.5	0.8	1.1
1980	1.2	1.3	0.7	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.6	0.8	1.1
1981	1.1	1.3	0.8	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.5	0.8	1.1
1982	1.2	1.3	0.8	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.6	0.8	1.2
1983	1.2	1.3	0.7	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.5	0.8	1.2
1984	1.1	1.3	0.7	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.3	0.4	0.5	0.8	1.2
1985	1.2	1.3	0.6	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.6	0.8	1.2
1986	1.2	1.3	0.7	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	0.4	0.5	0.8	1.2
1987	1.2	1.3	0.7	0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.5	0.8	1.2
1988	1.2	1.4	0.7	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.6	0.9	1.3
1989	1.2	1.4	0.8	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.6	0.9	1.3
1990	1.3	1.4	0.7	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.6	0.9	1.4

October	Age															
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1972	1.2	1.2	1.1	1.0	0.9	0.9	0.8	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
1973	1.1	1.1	1.1	1.0	0.8	0.9	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.6
1974	1.1	1.1	1.1	1.0	0.9	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.7
1975	1.1	1.1	1.1	1.0	0.9	0.8	0.9	0.8	0.8	0.7	0.8	0.8	0.7	0.7	0.7	0.7
1976	1.1	1.1	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.6
1977	1.1	1.1	1.1	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.7	0.7
1978	1.1	1.1	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6
1979	1.1	1.1	1.0	0.9	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.6
1980	1.1	1.1	1.1	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6
1981	1.2	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.6	0.6
1982	1.2	1.2	1.1	1.0	0.9	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.7	0.7	0.6	0.6
1983	1.2	1.2	1.1	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6
1984	1.2	1.2	1.1	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6
1985	1.3	1.2	1.2	1.0	0.9	0.8	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6
1986	1.3	1.2	1.2	1.1	0.9	0.8	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.5
1987	1.3	1.3	1.2	1.1	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.5
1988	1.4	1.4	1.3	1.2	1.0	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
1989	1.4	1.4	1.4	1.3	1.1	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.6	0.6
1990	1.4	1.4	1.3	1.3	1.1	1.0	0.9	0.8	0.8	0.7	0.6	0.6	0.7	0.6	0.5	0.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 2-1 Enrollment rate (percentage enrolled) of 3- and 4-year-olds in pre-K and kindergarten, by race/ethnicity: October 1974–1989 (3-year average)

October	Enrolled in pre-K				Enrolled in kindergarten			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1974	21.3	21.6	21.1	15.6	6.8	6.1	9.5	8.2
1975	23.0	23.6	22.2	15.8	7.5	6.7	10.3	9.1
1976	24.1	24.7	23.9	15.4	7.5	6.6	10.8	7.5
1977	25.4	26.1	25.8	15.4	7.1	6.4	11.0	6.0
1978	27.3	27.9	27.6	16.2	6.5	5.5	11.3	4.8
1979	29.2	29.8	28.9	20.9	6.2	5.4	10.9	4.9
1980	29.7	30.7	28.0	20.6	6.2	5.3	10.6	5.8
1981	30.4	32.3	28.4	18.7	6.0	5.1	9.5	6.3
1982	30.6	32.8	28.7	15.7	6.1	5.4	8.5	7.7
1983	30.7	32.9	28.9	15.3	6.0	5.2	8.8	8.0
1984	31.2	33.6	28.7	17.4	6.4	5.4	10.5	7.7
1985	31.9	34.6	28.6	19.2	6.1	4.8	11.4	7.6
1986	32.4	35.5	27.4	20.3	6.3	4.7	12.1	8.3
1987	32.5	36.1	25.9	18.7	6.0	4.3	10.4	9.1
1988	33.0	36.8	26.7	18.0	5.5	4.1	9.6	7.6
1989	36.0	39.9	30.4	19.6	4.5	3.7	7.5	6.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 2-2 Enrollment rate (percentage enrolled) of 5-year-olds in pre-K, kindergarten, and grades 1 or 2, by race/ethnicity: October 1974–1989 (3-year average)

October	Enrolled in pre-K				Enrolled in kindergarten				Enrolled in grades 1 or 2			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1974	2.7	2.5	4.3	3.0	76.0	77.7	69.2	69.5	10.2	9.5	12.5	12.1
1975	2.8	2.6	3.7	2.5	77.7	79.3	71.4	74.1	10.3	9.3	14.0	10.6
1976	3.0	2.9	3.7	2.6	78.7	80.0	73.8	76.0	9.9	9.0	13.9	9.2
1977	3.0	3.0	3.5	1.6	78.9	79.9	74.6	78.5	10.0	9.4	12.9	8.0
1978	3.5	3.4	4.1	1.8	79.1	80.4	74.6	76.6	9.4	8.6	13.0	5.7
1979	3.4	3.4	4.0	0.8	80.0	81.5	74.7	77.5	8.8	7.7	12.7	6.8
1980	3.4	3.5	3.3	2.4	80.0	81.8	75.5	73.1	8.1	6.5	13.3	7.4
1981	3.2	3.5	3.1	1.7	80.2	81.9	76.1	74.0	7.7	6.3	12.5	10.3
1982	4.1	4.6	3.0	2.7	79.2	80.7	75.1	74.5	7.6	6.2	13.1	9.4
1983	4.4	4.9	3.2	2.5	79.5	80.6	76.0	76.6	7.4	6.1	11.5	10.4
1984	4.9	5.3	3.5	3.3	80.1	81.5	76.5	76.9	7.1	5.8	11.1	10.7
1985	4.4	4.8	3.0	3.1	81.4	82.6	79.4	77.6	6.1	4.9	9.1	9.5
1986	5.4	6.1	2.4	4.6	81.0	81.6	82.1	76.3	5.7	4.6	8.5	8.1
1987	6.1	6.9	2.5	5.3	80.4	81.1	80.6	77.5	5.4	3.9	9.8	7.0
1988	7.1	8.1	3.4	5.9	79.3	80.1	79.1	75.8	5.6	4.0	10.3	8.0
1989	7.7	8.7	5.2	5.2	79.6	80.7	77.6	77.8	5.3	3.5	9.7	7.6

NOTE: State laws specify, variously, the minimum age students have to be on specific dates, usually some months after the start of the school year, to enter a specific grade.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 2-3 Standard errors for estimated percentages in table 2-1

Survey Year	Enrolled in pre-K				Enrolled in kindergarten			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1974	0.5	0.5	1.3	1.7	0.3	0.3	0.9	1.3
1975	0.5	0.6	1.3	1.7	0.3	0.3	1.0	1.3
1976	0.5	0.6	1.4	1.7	0.3	0.3	1.0	1.2
1977	0.5	0.6	1.4	1.7	0.3	0.3	1.0	1.1
1978	0.5	0.6	1.5	2.1	0.3	0.3	1.0	1.2
1979	0.5	0.6	1.5	2.1	0.3	0.3	1.0	1.1
1980	0.5	0.6	1.5	2.0	0.3	0.3	1.0	1.1
1981	0.5	0.6	1.4	1.6	0.3	0.3	0.9	1.0
1982	0.6	0.7	1.5	1.6	0.3	0.3	0.9	1.1
1983	0.6	0.7	1.5	1.6	0.3	0.3	0.9	1.2
1984	0.6	0.7	1.5	1.6	0.3	0.3	1.0	1.1
1985	0.6	0.7	1.5	1.6	0.3	0.3	1.0	1.0
1986	0.6	0.7	1.5	1.5	0.3	0.3	1.1	1.0
1987	0.6	0.7	1.4	1.4	0.3	0.3	1.0	1.1
1988	0.5	0.6	1.4	1.3	0.3	0.3	0.9	0.9
1989	0.5	0.7	1.4	1.4	0.2	0.3	0.8	0.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 2-4 Standard errors for estimated percentages in table 2-2

Survey Year	Enrolled in pre-K				Enrolled in kindergarten				Enrolled in grades 1 or 2			
	Total	White	Black	Hispanic	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1974	0.2	0.2	0.8	1.3	0.6	0.7	1.8	2.7	1.3	1.5	3.7	5.4
1975	0.2	0.3	0.7	1.1	0.6	0.6	1.7	2.5	1.3	1.5	3.5	5.3
1976	0.2	0.3	0.7	1.1	0.6	0.6	1.7	2.4	1.3	1.5	3.6	5.3
1977	0.2	0.3	0.7	0.9	0.6	0.7	1.7	2.3	1.4	1.6	3.6	5.4
1978	0.3	0.3	0.8	1.1	0.6	0.7	1.7	2.9	1.4	1.6	3.7	5.4
1979	0.3	0.3	0.8	0.7	0.6	0.7	1.7	2.8	1.4	1.6	3.7	5.4
1980	0.3	0.3	0.7	1.1	0.6	0.7	1.7	2.8	1.4	1.6	3.7	5.0
1981	0.3	0.3	0.7	0.8	0.6	0.7	1.7	2.2	1.4	1.7	3.7	4.8
1982	0.3	0.4	0.7	1.0	0.6	0.7	1.8	2.3	1.5	1.8	3.9	4.9
1983	0.3	0.4	0.7	1.0	0.6	0.7	1.8	2.2	1.5	1.7	4.0	5.1
1984	0.3	0.4	0.8	1.1	0.6	0.7	1.7	2.2	1.4	1.7	3.9	4.9
1985	0.3	0.4	0.7	1.0	0.6	0.7	1.6	2.0	1.4	1.7	3.8	4.8
1986	0.3	0.4	0.6	1.2	0.6	0.7	1.5	2.0	1.4	1.7	3.8	4.4
1987	0.3	0.4	0.6	1.2	0.6	0.7	1.5	1.9	1.4	1.7	3.8	4.4
1988	0.4	0.5	0.8	1.4	0.6	0.8	1.7	2.2	1.5	1.9	4.1	4.9
1989	0.4	0.5	0.9	1.3	0.6	0.7	1.8	2.1	1.5	1.9	4.0	4.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 3-1 Percentage of 8-year-olds 1 or more years below modal grade, by race/ethnicity and sex: 1974–1989 (3-year average)

Year	Total		White		Black		Hispanic	
	Male	Female	Male	Female	Male	Female	Male	Female
1974	17.8	12.2	16.7	10.9	21.0	14.4	27.2	23.1
1975	17.5	12.7	17.2	11.2	17.4	15.9	24.6	23.8
1976	16.6	12.6	16.6	11.3	16.9	15.1	18.7	22.1
1977	17.1	12.9	16.5	11.4	18.2	15.6	21.8	23.8
1978	18.6	13.1	17.6	12.3	21.5	14.3	24.0	23.1
1979	19.8	14.2	18.6	13.2	21.9	15.1	31.8	26.4
1980	20.7	15.1	19.9	14.2	21.8	15.6	29.0	24.3
1981	21.5	16.4	20.5	14.9	22.7	17.8	28.7	25.0
1982	23.0	16.5	22.8	15.2	22.8	18.2	26.1	23.1
1983	23.8	16.9	23.1	15.6	26.9	17.7	25.5	26.0
1984	24.2	17.6	24.1	15.9	26.8	19.2	23.1	27.3
1985	24.8	18.4	23.6	16.8	32.6	20.2	24.6	28.2
1986	25.6	19.4	25.7	18.0	29.6	23.7	24.0	21.1
1987	26.9	19.9	26.4	18.9	29.5	24.5	29.7	19.2
1988	28.0	21.0	28.1	20.4	26.8	24.7	31.7	20.2
1989	28.1	21.7	27.9	20.6	27.0	25.4	32.7	25.5

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 3-2 Percentage of 13-year-olds 1 or more years below modal grade, by race/ethnicity and sex: 1974–1989 (3-year average)

Year	Total		White		Black		Hispanic	
	Male	Female	Male	Female	Male	Female	Male	Female
1974	26.9	18.1	24.1	15.3	41.7	27.0	35.4	33.5
1975	25.1	17.2	23.1	14.4	35.3	24.9	32.9	33.9
1976	24.0	16.7	22.6	14.1	29.6	24.2	34.5	29.9
1977	23.4	16.1	21.9	13.4	30.5	23.1	30.9	31.9
1978	23.6	16.6	21.6	13.8	32.9	26.3	32.5	30.3
1979	24.6	17.0	22.1	14.2	35.5	24.7	34.1	35.3
1980	25.8	18.6	23.0	15.7	37.2	26.8	35.3	33.5
1981	27.9	19.7	24.8	16.0	39.6	29.6	36.1	34.7
1982	30.3	21.1	26.8	17.8	44.6	30.8	41.3	33.5
1983	31.8	21.8	27.6	18.3	46.6	30.4	46.4	38.3
1984	32.4	22.4	27.9	18.9	46.7	32.1	49.4	36.5
1985	31.3	23.4	26.7	18.9	44.0	34.8	46.5	40.2
1986	32.9	24.2	28.2	20.0	43.8	35.5	50.0	35.2
1987	33.6	24.1	29.5	20.2	42.7	34.2	49.5	35.9
1988	35.3	24.8	31.8	20.7	45.4	35.9	46.6	36.3
1989	35.9	25.6	32.4	21.1	49.2	38.0	42.9	37.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 3-3 Standard errors for estimated percentages in table 3-1

Year	Total		White		Black		Hispanic	
	Male	Female	Male	Female	Male	Female	Male	Female
1974	0.7	0.6	0.8	0.7	2.2	1.9	3.6	3.5
1975	0.7	0.7	0.8	0.7	2.1	2.0	3.5	3.6
1976	0.7	0.7	0.8	0.7	2.1	2.0	3.1	3.7
1977	0.7	0.7	0.8	0.7	2.1	2.0	3.2	3.7
1978	0.8	0.7	0.8	0.7	2.2	1.9	4.1	4.4
1979	0.8	0.7	0.9	0.8	2.2	2.0	4.5	4.1
1980	0.8	0.7	0.9	0.8	2.3	2.0	4.1	3.7
1981	0.8	0.8	1.0	0.9	2.4	2.2	3.4	3.1
1982	0.9	0.8	1.1	0.9	2.5	2.3	3.4	3.2
1983	0.9	0.8	1.1	1.0	2.7	2.3	3.4	3.3
1984	0.9	0.8	1.1	1.0	2.7	2.3	3.2	3.3
1985	0.9	0.9	1.1	1.0	2.8	2.3	3.2	3.3
1986	0.9	0.9	1.1	1.0	2.6	2.4	3.1	2.9
1987	0.9	0.9	1.1	1.0	2.6	2.5	3.2	2.7
1988	1.0	0.9	1.2	1.1	2.7	2.7	3.4	3.0
1989	1.0	0.9	1.2	1.1	2.7	2.7	3.3	3.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 3-4 Standard errors for estimated percentages in table 3-2

Year	Total		White		Black		Hispanic	
	Male	Female	Male	Female	Male	Female	Male	Female
1974	0.8	0.7	0.9	0.7	2.6	2.3	3.8	3.8
1975	0.8	0.7	0.8	0.7	2.5	2.2	3.7	3.7
1976	0.8	0.7	0.8	0.7	2.4	2.2	4.0	3.6
1977	0.8	0.7	0.8	0.7	2.4	2.2	3.9	3.8
1978	0.8	0.7	0.9	0.7	2.4	2.3	4.9	4.7
1979	0.8	0.7	0.9	0.8	2.5	2.3	4.8	4.8
1980	0.8	0.8	0.9	0.8	2.6	2.4	4.3	4.3
1981	0.9	0.8	1.0	0.8	2.6	2.5	3.5	3.5
1982	0.9	0.8	1.0	0.9	2.9	2.6	3.7	3.6
1983	0.9	0.9	1.0	0.9	2.8	2.6	3.8	3.8
1984	1.0	0.9	1.1	1.0	2.9	2.7	3.7	3.9
1985	1.0	0.9	1.1	1.0	2.9	2.7	3.6	3.8
1986	1.0	0.9	1.1	1.1	2.9	2.8	3.4	3.6
1987	1.0	0.9	1.2	1.1	2.9	2.8	3.5	3.5
1988	1.1	1.0	1.3	1.2	3.2	3.0	3.9	3.8
1989	1.1	1.0	1.3	1.2	3.2	3.0	3.9	3.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 4-1 Standard errors for text table for *Indicator 4*

Language spoken	1979			1989		
	Enrolled in School	Number below modal grade	Percent below modal grade	Enrolled in School	Number below modal grade	Percent below modal grade
	(in thousands)					
All children	25	86	0.3	25	126	0.5
Speak other language at home						
Total[1]	9	28	1.3	13	46	1.6
Spanish	7	24	1.7	12	38	2.0
All other European languages	3	11	2.5	3	13	4.7
Asian languages	4	8	4.8	4	16	3.8
All other languages	3	([2])	([2])	0	13	5.6
Limited English proficient						
Total	6	15	2.7	7	25	3.0
Spanish	5	14	3.0	7	21	3.6
All other European languages	0	([2])	([2])	3	([2])	([2])
Asian languages	1	([2])	([2])	0	9	7.6
All other languages	0	([2])	([2])	0	([2])	([2])

[1] Includes some children for whom a specific language was not reported.

[2] Too few sample observations for a reliable estimate.

NOTE: The data provided in indicator 6 are the result of a merge that was made of the November 1979 and November 1989 CPS supplements (containing language, ethnicity, and immigration data) with the October 1979 and October 1989 CPS supplements (containing information on school enrollment). Three-quarters of the sample for the CPS was interviewed in the two consecutive months of 1979 and 1989 and a good match was achieved for over 90 percent of the overlapping sample by keying the match on age, sex, and race within a matched household. The matched sample was weighted to a national estimate by multiplying the monthly weight for November by a factor of 1.334. This resulted in an estimate of the merged sample of all children 8- to 14-years-old that was about 93 percent of the estimate from the full individual monthly samples.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October and November Current Population Survey, 1979 and 1989.

Note on estimates of non-English language and English language proficiency:

Source of data in Indicator 4. The figures shown in this indicator are derived from the U.S. Bureau of the Census' Current Population Survey (CPS). Questions on language usage and English language ability were asked of the household respondent (usually the household head or the spouse of the household head) about all household members 5 years old and over. For each of these persons the questions consisted of the following: "a. Does this persons speak a language other than English at home?" If yes, then "b. What language does this person speak?" and "c. How well does this person speak English? Very well, Well, Not well, or Not at All."

Researchers and policymakers recognized that the question on English ability is an extremely subjective one: it is not possible to apply an objective standard to a person's own reporting of their own English ability, or even worse, that person's reporting of the English ability of other household members, to determine whether that person is really limited in his or her English ability. Thus as a means of validating the English ability question, the English Language Proficiency Survey (ELPS) was sponsored by the Department of Education and carried out by the Census Bureau in 1982. The results of that survey, which included a lengthier set of questions about language and tests of English ability geared to age, revealed a strong correlation between responses on the English ability question and the test scores.[1] Using a set pass/fail score, persons who had reported English speaking ability of "Very well" passed at a rate similar to English-only persons (who were used as a control group); persons who reported less than "Very well", i.e., "Well", "Not well" or "Not at all", had significantly higher rates of failure. These results indicated that, although it would not be advisable to use a person's reporting on the English language ability question as a diagnostic tool for determining that person's own need for language services, it was appropriate to use the results as an aggregate measure for the population as a whole. Thus the number of persons who reported speaking English less than "Very Well" may be considered one measure of the number of limited English proficient persons in the country.

The monthly CPS collected information about language usage in November 1979 and November 1989 and collects information about school enrollment every October. To enable analysis of persons' language and school enrollment characteristics, data from the October and November survey supplements were merged together to obtain linked information. The data shown are for persons whose language characteristics were reported in the survey, (approximately 95 percent of the total sample). Hence both the number of non-English speakers and the number of persons with difficulty speaking English are probably larger because the estimates shown do not include any adjustment to compensate for those cases for whom no language characteristics were reported or imputed. The base for the percentages shown is the total number of cases with reported language data. Thus the percentages of children with limited English ability and of children behind in school are reliable estimates (assuming that the percentage with these characteristics is the similar for reporting and non-reporting cases cases). Also it is appropriate to use these data to create estimates of change over the time from 1979 to 1989.

Alternate data sources. There are several potential alternate data sources. Most important among them is the 1990 decennial census of population. Data from the census are currently beginning to be released. The census will report language information for the entire population (i.e., imputation for nonresponse is performed). The data will be useful to analyze characteristics of the population in small geographic areas and for relatively rarely reported languages. Unfortunately the census did not collect information about individual years of school completed in the elementary grades. Thus it will not be possible to study progress through school in the way this indicator does.

The Office of Bilingual Education and Minority Language Affairs prepares estimates of language characteristics of the U.S. student population which are contained in an annual report, *Condition of Bilingual Education in the Nation: 1991* (CBE).[2] These estimates are based upon two sources: state administrative record data and projections of estimates based upon the 1980 census and the 1982 English Language Proficiency Survey (described above). The state administrative records provide estimates of children with limited English language proficiency. Using these data, the CBE reported 1.9 million limited English proficient students in the school year 1989–90 (compared to the CPS estimate of 830,000 students in the 50 states and D.C.). The administrative records which were used classified students by methods which are unique to each state involving individual testing, teacher determinations, etc. Thus, unless carefully qualified, numbers of students in one state who were identified using one method should not be compared to the numbers of students in another state identified using another method. Recently, the Council of Chief State School Officers recommended that the states try to develop methods of identifying and assessing these students that are comparable across the states. Also reported in the CBE are projections to 1986 based upon the 1982 English Language Proficiency Survey. The 1982 estimates were of the number of children aged 5 to 17 in language minority households, who made substantial use of a language other than English, and who scored at or below the twentieth percentile on the measure of English language. These estimates were projected to 1986 by using estimates of population growth and immigration rates in the interim. Using this methodology, they project that in 1986 there were between 1.2 million and 1.7 million 5- to 17-year-old children who would be considered limited English proficient. However, the projections should be used with caution because they update estimates for a population which over the past ten years has been rapidly growing and also rapidly changing in its characteristics (e.g., countries of origin, educational attainment, occupational characteristics).

NOTES:

1. Kominski, Robert. 1989. "How good is 'How Well'? An examination of the census English-speaking ability question." a paper presented at the annual meetings of the American Statistical Association, Washington, D.C.

2. U.S. Department of Education, *The Condition of Bilingual Education in the Nation: A Report to the Congress and the President*, June 30, 1991.

Table 5-1 Single-year school persistence rate in grades 10–12, ages 15–24, by sex and race/ethnicity: 1972–1990

Year	Total	Male	Female	White	Black	Hispanic	Male			Female		
							White	Black	Hispanic	White	Black	Hispanic
1972	93.9	94.1	93.7	94.7	90.5	88.8	95.0	90.2	88.5	94.4	90.7	89.1
1973	93.7	93.2	94.3	94.5	90.1	90.0	94.0	88.2	92.1	95.0	91.8	88.2
1974	93.3	92.6	94.0	94.2	88.4	90.1	93.4	89.2	87.2	95.1	87.7	92.9
1975	94.2	94.6	93.9	95.0	91.3	89.1	95.3	91.6	89.7	94.6	91.0	88.4
1976	94.1	93.5	94.8	94.4	92.6	92.7	93.7	91.5	92.4	95.1	93.7	92.9
1977	93.5	93.1	93.9	93.9	91.4	92.2	93.4	92.2	90.2	94.4	90.7	94.7
1978	93.3	92.5	94.1	94.2	89.8	87.7	93.6	89.0	84.1	94.9	90.5	91.5
1979	93.3	93.2	93.3	94.0	90.1	90.2	93.6	92.2	89.5	94.3	88.3	90.9
1980	93.9	93.3	94.5	94.8	91.8	88.3	94.3	92.3	82.4	95.2	91.3	93.3
1981	94.1	94.0	94.2	95.2	90.3	89.3	94.8	90.6	89.3	95.5	90.0	89.3
1982	94.5	94.2	94.9	95.3	92.2	90.8	95.1	91.1	90.5	95.4	93.4	91.2
1983	94.8	94.2	95.3	95.6	93.0	89.9	95.3	93.1	86.2	96.0	92.9	93.8
1984	94.9	94.6	95.2	95.6	94.3	88.9	95.2	94.0	87.7	95.9	94.5	89.8
1985	94.8	94.6	95.0	95.7	92.2	90.2	95.4	91.7	90.6	95.9	92.7	90.0
1986	95.3	95.3	95.3	96.3	94.6	88.1	96.2	94.9	87.6	96.3	94.3	88.7
1987	95.9	95.7	96.2	96.5	93.6	94.6	96.1	93.8	95.2	96.9	93.3	94.0
1988	95.2	94.9	95.6	95.8	94.1	89.6	95.7	93.8	87.7	95.9	94.4	91.8
1989	95.5	95.5	95.5	96.5	92.2	92.2	96.3	93.0	92.2	96.7	91.4	92.3
1990	96.0	96.0	96.1	96.7	95.0	92.1	96.5	95.8	91.3	96.9	94.3	92.8

NOTE: The school persistence rate is 100 minus the event dropout rate. The event dropout rate is the percentage of those enrolled in grades 10–12 the previous October who have not completed high school and are not enrolled this October. Data for 1987 through 1990 reflect new editing procedures instituted by the Bureau of the Census for cases involving missing school enrollment items.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 5-2 Average percentage of college students 16- to 24-years-old enrolled the previous October who are enrolled again the following October, by race/ethnicity and level: 1972–1990

Year	Total	Race/ethnicity			College level previous October		
		White	Black	Hispanic	1st year	2nd year	3rd year
1972	77.7	78.1	71.3	78.1	76.9	72.7	86.2
1973	76.7	76.8	77.2	73.8	73.5	74.2	85.5
1974	77.5	77.4	74.3	76.0	75.1	73.8	85.9
1975	79.3	79.9	77.0	72.8	78.7	73.6	87.6
1976	79.2	79.3	81.3	74.9	80.0	73.6	85.4
1977	79.2	79.3	79.1	75.9	77.6	75.4	87.0
1978	77.7	77.8	75.3	76.7	76.8	73.8	84.4
1979	77.8	78.4	73.6	72.4	77.9	72.9	83.9
1980	79.0	80.2	71.0	69.2	78.8	73.7	86.7
1981	78.0	79.4	72.3	72.5	77.0	73.9	84.9
1982	80.4	81.2	74.6	77.4	79.5	78.1	84.9
1983	80.3	81.1	74.8	74.4	80.0	75.5	87.1
1984	79.1	79.8	74.2	72.8	77.9	75.4	86.7
1985	79.7	81.0	71.4	67.7	78.0	76.3	87.1
1986	80.2	80.5	74.4	81.7	81.0	74.1	87.2
1987	81.3	82.9	69.6	74.9	81.4	77.2	87.1
1988	83.0	83.7	78.0	77.0	81.2	79.8	90.7
1989	83.8	84.3	79.0	81.1	82.1	82.2	88.8
1990	81.8	81.7	79.4	79.7	81.8	75.9	89.7

NOTE: See supplemental note to *Indicator 5* for a description of the method used to determine a respondent's enrollment the previous October.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 5-3 Continous attendance and grade level progression rates of students 15 to 24 years old, by sex, race/ethnicity, and grade level the previous October: October 1990

Grade last year	Total	Sex		Race/ethnicity		
		Male	Female	White	Black	Hispanic
			Continuous attendance rate (percent)			
9–11 average	97.0	97.0	97.1	97.6	96.1	94.5
9	97.5	97.5	97.5	98.0	96.4	95.7
10	97.4	97.4	97.3	97.8	97.5	94.6
11	96.1	95.8	96.4	97.0	94.0	93.0
12	61.5	59.9	63.2	63.1	53.9	54.9
13–15 average	81.5	82.8	80.3	81.5	79.0	79.8
13	79.4	81.6	77.4	79.1	77.3	82.1
14	78.1	78.4	77.9	78.6	73.6	70.2
15	90.5	91.1	90.0	90.0	93.4	(*)
16	42.9	43.8	42.2	40.6	55.3	(*)
17	67.0	75.5	58.3	65.9	(*)	(*)
			Grade level progression rate (percent)			
9–11 average	97.3	96.8	97.7	97.7	96.1	95.7
9	96.9	96.7	97.3	97.4	96.3	94.5
10	96.9	96.3	97.6	97.7	94.6	94.9
11	98.0	97.7	98.4	98.0	97.7	98.2
12	93.7	93.4	94.0	96.0	85.2	83.8
13–15 average	87.7	87.5	87.9	88.1	85.7	89.1
13	87.7	87.0	88.3	87.9	86.4	88.2
14	84.6	84.7	84.5	84.9	86.8	(*)
15	91.7	91.6	91.8	92.4	82.4	(*)
16	60.5	54.1	65.4	56.0	(*)	(*)
17	78.5	75.8	(*)	76.9	(*)	(*)

*Too few sample observations for a reliable estimate.

NOTE: The continuous attendance rate is the percentage of those enrolled the previous October who were enrolled again the following October. The grade level progression rate is the percentage of those enrolled two consecutive Octobers who advanced at least one grade level. At most grade levels, the continuous attendance rate is conceptually similar to the school persistence rate of table 5-1, but is numerically slightly different because of data used to measure grade level the previous October. However, the continuous attendance rate for grade 12 is the percentage of students in grade 12 the previous October who enrolled in college (or in grade 12 again) the following October. Similarly, the continuous attendance rate for grade 16 (4th year of college) is the percentage of students in grade 16 the previous October who enrolled in the 5th year of college (or in the 4th year again) the following October.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 5-4 Standard errors for estimated percentages in table 5-1

Year	Total	Male	Female	White	Black	His-panic	Male			Female		
							White	Black	Hispanic	White	Black	Hispanic
1972	0.3	0.5	0.5	0.3	1.3	2.1	0.5	2.0	3.1	0.5	1.8	3.0
1973	0.3	0.5	0.5	0.3	1.4	2.0	0.5	2.2	2.6	0.5	1.7	3.0
1974	0.3	0.5	0.5	0.4	1.4	1.9	0.5	2.0	3.1	0.5	2.0	2.3
1975	0.3	0.4	0.5	0.3	1.3	1.9	0.5	1.8	2.6	0.5	1.8	2.8
1976	0.3	0.5	0.4	0.4	1.2	1.6	0.5	1.8	2.3	0.5	1.5	2.1
1977	0.3	0.5	0.5	0.4	1.2	1.6	0.5	1.6	2.5	0.5	1.8	2.0
1978	0.3	0.5	0.5	0.4	1.3	2.1	0.5	2.0	3.3	0.5	1.7	2.6
1979	0.3	0.5	0.5	0.4	1.3	1.9	0.5	1.8	2.8	0.5	2.0	2.6
1980	0.3	0.5	0.5	0.4	1.2	2.0	0.5	1.7	3.5	0.5	1.7	2.1
1981	0.3	0.5	0.5	0.3	1.3	1.8	0.5	1.9	2.5	0.5	1.8	2.5
1982	0.3	0.5	0.5	0.4	1.2	1.8	0.5	1.8	2.4	0.5	1.6	2.6
1983	0.3	0.5	0.5	0.4	1.2	1.9	0.5	1.7	3.0	0.5	1.6	2.1
1984	0.3	0.5	0.5	0.4	1.1	1.9	0.5	1.6	3.0	0.5	1.5	2.5
1985	0.4	0.5	0.5	0.4	1.3	2.6	0.5	1.9	3.7	0.5	1.8	3.5
1986	0.3	0.5	0.5	0.3	1.1	2.7	0.5	1.5	3.9	0.5	1.5	3.7
1987	0.3	0.4	0.4	0.3	1.2	1.9	0.5	1.6	2.5	0.4	1.7	2.8
1988	0.4	0.5	0.5	0.4	1.2	3.1	0.6	1.7	4.5	0.6	1.7	4.1
1989	0.4	0.5	0.5	0.4	1.4	2.6	0.5	1.9	3.7	0.5	2.1	3.8
1990	0.4	0.5	0.5	0.4	1.2	2.6	0.5	1.6	4.0	0.5	1.8	3.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 5-5 · Standard errors for estimates percentages in table 5-2

Year	Total	Race/ethnicity			College level previous October		
		White	Black	Hispanic	1st year	2nd year	3rd year
1972	0.9	1.0	3.7	5.8	1.3	1.6	1.4
1973	0.9	1.0	3.1	5.8	1.4	1.6	1.5
1974	0.9	1.0	3.9	4.3	1.4	1.6	1.4
1975	0.9	1.0	2.8	4.9	1.2	1.6	1.4
1976	0.9	1.0	2.7	4.0	1.2	1.5	1.5
1977	0.9	1.0	3.0	4.5	1.3	1.5	1.4
1978	0.9	1.0	2.8	4.2	1.3	1.5	1.4
1979	0.9	1.0	2.9	4.4	1.3	1.5	1.5
1980	0.9	1.0	3.1	4.6	1.2	1.5	1.4
1981	0.9	1.0	2.9	4.8	1.3	1.5	1.4
1982	0.8	1.0	2.7	4.0	1.3	1.5	1.5
1983	0.8	0.9	2.9	4.1	1.3	1.5	1.4
1984	0.8	1.0	2.8	4.1	1.4	1.5	1.4
1985	0.8	0.9	3.1	4.0	1.3	1.5	1.4
1986	0.8	1.0	2.7	3.4	1.3	1.6	1.4
1987	0.8	1.0	2.8	3.3	1.2	1.5	1.5
1988	0.8	0.9	2.4	3.5	1.3	1.6	1.3
1989	0.8	0.9	2.5	3.7	1.3	1.5	1.4
1990	0.8	0.9	2.7	3.6	1.3	1.6	1.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 5-6 Standard errors of estimated percentages in table 5-3

Grade last year	Total	Sex		Race/ethnicity		
		Male	Female	White	Black	Hispanic
			Continuous attendance rate			
9–11 average	0.3	0.4	0.4	0.3	1.0	1.5
9	0.5	0.7	0.7	0.5	1.6	2.3
10	0.5	0.7	0.7	0.5	1.4	2.4
11	0.6	0.9	0.8	0.7	2.4	3.0
12	1.6	2.2	2.2	1.8	4.6	7.2
13–15 average	0.9	1.2	1.2	1.0	3.2	4.3
13	1.3	1.8	1.9	1.5	4.6	5.6
14	1.6	2.3	2.2	1.7	6.5	8.8
15	1.4	1.8	2.0	1.5	4.7	(*)
16	2.8	4.2	3.6	3.0	10.5	(*)
17	4.6	5.9	6.9	5.0	(*)	(*)
			Grade level progression rate			
9–11 average	0.3	0.4	0.4	0.3	1.1	1.3
9	0.5	0.8	0.7	0.6	1.7	2.6
10	0.5	0.8	0.7	0.6	2.1	2.4
11	0.5	0.7	0.6	0.5	1.5	1.6
12	1.0	1.4	1.3	0.9	4.5	7.2
13–15 average	0.8	1.1	1.1	0.9	3.1	3.7
13	1.2	1.8	1.7	1.4	4.2	5.2
14	1.6	2.2	2.2	1.7	5.9	(*)
15	1.3	1.9	1.9	1.4	7.5	(*)
16	4.2	6.4	5.4	4.7	(*)	(*)
17	5.6	7.5	(*)	6.2	(*)	(*)

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Note on persistence rates

The event dropout rate is the number of recent dropouts as a percentage of estimated 10th-, 11th-, and 12th-grade enrollment the previous October. The high school persistence rate is 100 minus the event dropout rate.

The high school persistence rate is defined as the proportion of students enrolled in grades 10, 11, and 12 the previous October who either enrolled again the following October or graduated from high school. To calculate these rates requires estimating 1) the number who left high school before graduating (recent dropouts), and 2) the number of students enrolled in grades 10, 11, and 12 the previous October. Using the October Current Population Survey (CPS), the first is estimated as the number of persons 15 to 24 years old who were not enrolled during the month of the survey, who were enrolled 1 year earlier, and who have completed 11 or fewer years of schooling. The second is estimated by the sum of 3 groups: 1) recent dropouts, 2) those 15- to 24-year-olds enrolled in grades 11 and 12 during the survey month, and 3) those 15- to 24-year-olds who have completed 12 (or more) years of schooling and who indicate they graduated during the survey year. Those enrolled in special schools are counted as "not enrolled in regular school" and may be classified as recent dropouts.

The college student persistence rate is defined as the proportion of students enrolled the previous October who were enrolled in college again the following October. Calculating this rate requires distinguishing students who were enrolled in high school, college as undergraduates, and college as graduate students. The basis for distinguishing these groups is educational attainment. However, the October CPS reports only *current* educational attainment, so educational attainment for the previous October must be inferred.

Educational attainment in the CPS is reported as "years of schooling completed." Individuals with 12 years of schooling completed are regarded as high school graduates, 16 years completed as college graduates, and so on. Years of schooling completed is based on the responses to two questions: 1) "What is the highest grade . . . ever attended?" and 2) "Did . . . complete it?" For example, an individual who responds that the highest grade he ever attended was first year of college and that he did not complete it, is regarded as having completed 12 years of schooling.

For the purpose of calculating the persistence rate, two assumptions are made:

- First, respondents who were enrolled the previous October are assumed to have *then* reached their highest grade attended if they were not enrolled again the following October. This assumption would overstate the level for those who made the transition to the next level in mid-year.
- Second, respondents who were enrolled in October are assumed to have been in the highest year *completed* the previous October. This would understate the level for those who attended part time and had not made the transition to the next level during the previous year.

Consider three examples. First, those who were enrolled in the previous October, but not in the following October, and whose highest grade *attended* is 13 are assumed to have been freshmen in the previous October. Second, those who were enrolled in the previous October as well as the following October, and whose highest grade *completed* is 13 years of schooling, are assumed to have been freshmen in the previous October. Third, those who were enrolled in the previous October, but not in the following October, and whose highest grade *completed* is 16 years of schooling, are assumed to have been college seniors in the previous October. Some students may be misclassified, but if the extent of misclassification is not very different across groups or over time, then differences between groups and changes over time are useful, although the inferred level may be high or low.

Table 6-1 Standard errors for estimated percentages in text table for *Indicator 6*

Characteristic	Dropout rates		Completion rates for Sophomore class of 1980		
	Between the 8th and 10th grades, 1988–1990	Between the 10th and twelfth grades, 1980–1982	Completed on time (June 1982)	Completed between 1982–1986	Completion rate 1986
Total	0.4	0.6	0.6	0.4	0.4
Sex					
Male	0.6	0.8	0.8	0.6	0.6
Female	0.5	0.7	0.7	0.5	0.6
Race/ethnicity*					
White	0.4	0.6	0.6	0.4	0.4
Black	1.5	1.7	1.7	1.2	1.3
Hispanic	0.8	2.1	2.1	1.2	1.9
Asian/Pacific Is.	1.0	1.6	1.6	1.5	0.7
American Indian	2.3	5.1	5.1	2.0	5.2
Metropolitan status					
Urban	0.9	1.6	1.6	1.0	1.2
Suburban	0.5	0.7	0.7	0.5	0.5
Rural	0.8	0.9	0.9	0.5	0.8
Region					
Northeast	0.8	1.3	1.3	0.9	0.8
Midwest	0.7	1.0	1.0	0.6	0.7
South	0.7	1.0	1.0	0.7	0.8
West	1.1	1.4	1.4	1.0	1.3
School control					
Public	0.5	0.6	0.6	0.4	0.5
Catholic	0.4	1.3	1.3	1.0	0.7
Other	0.9	2.3	2.3	2.3	1.2

*For dropout rates between 8th and 10th grades, not shown separately are 434 persons whose race/ethnicity are unknown.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond, National Education Longitudinal Study of 1988, *Dropout Rates in the United States:* 1988, tables A12 and A13, and 1990, table A9.

Table 7-1 Percentage of high school graduates enrolling in college in October following graduation, by sex and type of college: 1973–1990

Year	Both sexes			Male			Female		
	Total	2-year	4-year	Total	2-year	4-year	Total	2-year	4-year
1973	46.6	14.9	31.7	50.0	14.6	35.4	43.4	15.2	28.2
1974	47.6	15.2	32.4	49.4	16.6	32.8	45.9	13.9	32.0
1975	50.7	18.2	32.6	52.6	19.0	33.6	49.0	17.4	31.6
1976	48.8	15.6	33.3	47.2	14.5	32.7	50.3	16.6	33.8
1977	50.6	17.5	33.1	52.1	17.2	35.0	49.3	17.8	31.5
1978	50.1	17.0	33.1	51.1	15.6	35.5	49.3	18.3	31.0
1979	49.3	17.5	31.8	50.4	16.9	33.5	48.4	18.1	30.3
1980	49.3	19.4	29.9	46.7	17.1	29.7	51.8	21.6	30.2
1981	53.9	20.5	33.5	54.8	20.9	33.9	53.1	20.1	33.0
1982	50.6	19.1	31.5	49.1	17.5	31.6	52.0	20.6	31.4
1983	52.7	19.2	33.5	51.9	20.2	31.7	53.4	18.4	35.1
1984	55.2	19.4	35.8	56.0	17.7	38.4	54.5	21.0	33.5
1985	57.7	19.6	38.1	58.6	19.9	38.8	56.8	19.3	37.5
1986	53.8	19.3	34.5	55.8	21.3	34.5	51.9	17.3	34.6
1987	56.8	18.9	37.9	58.3	17.3	41.0	55.3	20.3	35.0
1988	58.9	21.9	37.1	57.1	21.3	35.8	60.7	22.4	38.3
1989	59.6	20.7	38.9	57.6	18.3	39.3	61.6	23.1	38.5
1990	60.1	20.1	40.0	58.0	19.6	38.4	62.2	20.6	41.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 7-2 Percentage of high school graduates enrolling in college in October following graduation, by race/ethnicity: 1973–1989 (3-year averages)

Year	Race/ethnicity				
	Total	White	Black	Hispanic	Other*
1973	—	—	—	—	—
1974	48.3	48.7	40.5	53.1	69.3
1975	49.1	49.1	44.5	52.7	67.7
1976	50.1	50.3	45.3	53.6	57.3
1977	49.9	50.1	46.8	48.8	61.1
1978	50.0	50.4	47.5	46.1	56.4
1979	49.6	50.1	45.2	46.3	60.5
1980	50.8	51.5	44.0	49.6	64.3
1981	51.3	52.4	40.3	48.7	72.7
1982	52.4	54.2	38.8	49.4	69.0
1983	52.8	55.5	38.0	46.7	60.9
1984	55.1	57.9	39.9	49.3	60.1
1985	55.5	58.6	39.5	46.1	66.2
1986	56.1	58.5	43.5	42.3	72.5
1987	56.5	58.8	44.2	45.0	73.4
1988	58.4	60.1	49.7	48.5	73.9
1989	59.5	61.6	48.0	52.7	72.6
1990	—	—	—	—	—

— Not available.

* Includes individuals who are not Hispanic, white, or black; most are Asian and some are American Indian.

NOTE: Three-year averages. For example, the 3-year average percentage for 1989 reported in this table is based on combining the samples for 1988, 1989, and 1990, and calculating the percentage enrolled in college in October following high school graduation in the combined sample. This procedure removes some of the wide yearly fluctuations in the race/ethnicity specific rates.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 7-3 Standard errors for estimated percentages in table 7-1

Year	Both sexes			Male			Female		
	Total	2-year	4-year	Total	2-year	4-year	Total	2-year	4-year
1973	1.3	0.9	1.2	1.9	1.3	1.8	1.8	1.3	1.6
1974	1.3	0.9	1.2	1.9	1.4	1.8	1.8	1.2	1.7
1975	1.3	1.0	1.2	1.9	1.5	1.8	1.8	1.3	1.6
1976	1.3	1.0	1.2	1.9	1.3	1.8	1.8	1.4	1.7
1977	1.3	1.0	1.2	1.9	1.4	1.8	1.8	1.4	1.7
1978	1.3	1.0	1.2	1.9	1.4	1.8	1.8	1.4	1.6
1979	1.3	1.0	1.2	1.9	1.4	1.8	1.8	1.4	1.6
1980	1.3	1.0	1.2	1.9	1.4	1.7	1.8	1.5	1.7
1981	1.3	1.1	1.2	1.9	1.5	1.8	1.8	1.5	1.7
1982	1.3	1.0	1.2	1.9	1.4	1.7	1.8	1.5	1.7
1983	1.4	1.1	1.3	2.1	1.7	1.9	1.9	1.5	1.9
1984	1.4	1.1	1.3	2.0	1.6	2.0	1.9	1.6	1.8
1985	1.5	1.2	1.5	2.1	1.7	2.1	2.1	1.6	2.0
1986	1.5	1.2	1.4	2.1	1.7	2.0	2.0	1.5	1.9
1987	1.5	1.2	1.5	2.1	1.6	2.1	2.1	1.7	2.0
1988	1.6	1.3	1.6	2.3	1.9	2.2	2.2	1.9	2.2
1989	1.7	1.4	1.7	2.4	1.9	2.4	2.3	2.0	2.3
1990	1.7	1.4	1.7	2.4	1.9	2.4	2.4	2.0	2.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 7-4 Standard errors of estimated percentages in table 7-2

Year	Race/ethnicity				
	Total	White	Black	Hispanic	Other
1973	—	—	—	—	—
1974	0.7	0.8	2.4	3.9	6.6
1975	0.7	0.8	2.5	3.7	6.0
1976	0.7	0.8	2.5	3.6	6.2
1977	0.7	0.8	2.4	3.6	5.7
1978	0.7	0.8	2.4	3.5	5.7
1979	0.7	0.8	2.3	3.7	5.5
1980	0.8	0.9	2.5	3.9	5.7
1981	0.8	0.9	2.4	3.8	5.1
1982	0.8	0.9	2.3	3.8	5.1
1983	0.8	0.9	2.3	3.6	5.5
1984	0.8	0.9	2.3	3.7	5.3
1985	0.8	0.9	2.3	3.6	4.9
1986	0.8	0.9	2.5	3.6	4.3
1987	0.8	1.0	2.4	3.5	4.2
1988	0.9	1.0	2.5	3.5	4.4
1989	0.9	1.0	2.5	3.7	4.5
1990	—	—	—	—	—

— Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-1 Percentage of high school graduates enrolled in college as undergraduates, by age and type of college: 1973–1990

Year	16–24			25–34		
	All	2-year	4-year	All	2-year	4-year
1973	27.6	8.0	19.6	4.6	2.6	2.0
1974	28.5	8.9	19.7	5.4	3.2	2.2
1975	30.1	10.3	19.7	6.2	3.9	2.3
1976	30.7	8.1	22.5	5.7	2.9	2.8
1977	30.1	8.4	21.7	6.1	3.1	3.0
1978	29.2	8.3	21.0	5.3	2.6	2.7
1979	29.5	8.0	21.5	5.2	2.5	2.7
1980	29.7	8.9	20.8	5.3	2.7	2.6
1981	30.6	9.5	21.1	5.5	2.7	2.8
1982	31.1	9.7	21.3	5.2	2.7	2.5
1983	30.5	9.3	21.2	5.5	2.8	2.7
1984	31.1	9.0	22.1	5.2	2.6	2.7
1985	31.8	9.0	22.8	5.3	2.7	2.7
1986	31.8	9.2	22.6	5.3	2.6	2.7
1987	33.6	9.8	23.8	5.0	2.3	2.7
1988	34.9	10.6	24.3	5.0	2.3	2.7
1989	35.5	9.9	25.6	5.1	2.3	2.8
1990	36.7	10.7	26.0	5.6	2.6	3.0

NOTE: Undergraduates are persons enrolled in the 1st through 4th years of college. Persons not reporting the type of college they are attending have been allocated to the 2-year and 4-year categories in proportion to those who did report their type of college.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-2 Percentage of high school graduates enrolled in college as undergraduates, by sex, age, and type of college: 1973–1990

Year	Male						Female					
	16–24			25–34			16–24			25–34		
	All	2-year	4-year	All	2-year	4-year	All	2-year	4-year	All	2-year	4-year
1973	31.6	9.4	22.2	6.1	3.1	2.9	24.0	6.7	17.3	3.2	2.0	1.2
1974	32.0	10.3	21.6	6.9	4.2	2.8	25.4	7.5	17.9	3.9	2.3	1.6
1975	32.9	11.1	21.7	7.9	5.1	2.7	27.5	9.6	17.9	4.6	2.7	1.9
1976	32.5	8.5	23.9	7.0	3.4	3.6	29.1	7.8	21.2	4.4	2.4	1.9
1977	32.7	8.7	23.9	6.7	3.2	3.5	27.7	8.1	19.6	5.4	2.9	2.5
1978	31.4	8.4	23.0	5.8	2.9	2.9	27.3	8.2	19.1	4.9	2.3	2.6
1979	30.9	7.9	23.1	5.2	2.2	3.0	28.2	8.1	20.1	5.2	2.7	2.5
1980	30.9	8.8	22.1	4.9	2.3	2.6	28.7	9.0	19.6	5.6	3.1	2.5
1981	32.1	9.4	22.7	5.3	2.3	3.0	29.2	9.6	19.6	5.8	3.0	2.7
1982	32.1	9.3	22.8	5.1	2.4	2.7	30.1	10.1	20.1	5.4	3.0	2.3
1983	32.3	9.2	23.0	5.5	2.7	2.8	29.0	9.4	19.6	5.5	2.9	2.6
1984	33.1	9.3	23.7	5.0	2.3	2.6	29.3	8.7	20.6	5.5	2.8	2.7
1985	32.9	8.6	24.2	4.8	2.1	2.7	30.8	9.4	21.4	5.8	3.3	2.6
1986	33.0	9.3	23.7	5.0	2.2	2.7	30.7	9.2	21.5	5.7	3.0	2.7
1987	35.6	9.5	26.1	4.7	2.0	2.7	31.9	10.1	21.8	5.3	2.6	2.7
1988	35.6	10.4	25.2	4.6	1.7	2.9	34.3	10.8	23.5	5.4	2.9	2.5
1989	35.7	9.3	26.4	4.5	1.9	2.6	35.4	10.5	25.0	5.7	2.7	3.0
1990	37.7	10.7	27.0	4.6	1.9	2.7	35.7	10.7	25.1	6.5	3.3	3.2

NOTE: Undergraduates are persons enrolled in the 1st through 4th years of college. Persons not report the type of college they are attending have been allocated to the 2-year and 4-year categories in proportion to those who did report their type of college.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-3 Percentage of high school graduates enrolled in their fifth or higher year of college, by sex and age: 1973–1990

Year	Both sexes		Male		Female	
	16–24	25–34	16–24	25–34	16–24	25–34
1973	2.8	3.6	3.6	4.9	2.1	2.4
1974	2.6	3.9	3.3	4.9	2.0	3.0
1975	3.1	3.7	3.8	4.5	2.4	2.9
1976	3.0	3.9	3.5	4.9	2.5	3.0
1977	2.9	4.3	3.3	4.8	2.5	3.7
1978	2.7	3.8	3.2	4.3	2.3	3.3
1979	2.4	3.9	2.6	4.2	2.2	3.6
1980	2.5	3.6	2.9	4.0	2.2	3.3
1981	2.4	3.4	3.0	3.7	1.8	3.1
1982	2.4	3.7	2.9	3.9	1.9	3.6
1983	2.6	3.6	3.2	3.9	2.0	3.2
1984	2.6	3.4	3.3	3.8	2.0	3.1
1985	2.5	3.3	3.1	3.6	2.0	3.0
1986	2.6	2.9	2.7	3.5	2.5	2.3
1987	2.6	3.1	2.7	3.2	2.5	3.0
1988	2.4	3.0	2.5	3.1	2.2	2.9
1989	2.6	3.1	2.7	3.4	2.6	2.9
1990	2.6	3.0	2.5	3.2	2.6	2.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-4 Standard errors for estimated percentages in table 8-1

Year	Both sexes					
	16–24			25–34		
	All	2-year	4-year	All	2-year	4-year
1973	0.4	0.3	0.4	0.2	0.2	0.1
1974	0.4	0.3	0.4	0.2	0.2	0.1
1975	0.4	0.3	0.4	0.2	0.2	0.1
1976	0.4	0.3	0.4	0.2	0.1	0.1
1977	0.4	0.3	0.4	0.2	0.2	0.1
1978	0.4	0.3	0.4	0.2	0.1	0.1
1979	0.4	0.3	0.4	0.2	0.1	0.1
1980	0.4	0.3	0.4	0.2	0.1	0.1
1981	0.4	0.3	0.4	0.2	0.1	0.1
1982	0.5	0.3	0.4	0.2	0.1	0.1
1983	0.5	0.3	0.4	0.2	0.1	0.1
1984	0.5	0.3	0.4	0.2	0.1	0.1
1985	0.5	0.3	0.4	0.2	0.1	0.1
1986	0.5	0.3	0.4	0.2	0.1	0.1
1987	0.5	0.3	0.4	0.2	0.1	0.1
1988	0.5	0.4	0.5	0.2	0.1	0.1
1989	0.6	0.3	0.5	0.2	0.1	0.1
1990	0.6	0.4	0.5	0.2	0.1	0.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-5 Standard errors for estimated percentages in table 8-2

Year	Male						Female					
	16–24			25–34			16–24			25–34		
	All	2-year	4-year	All	2-year	4-year	All	2-year	4-year	All	2-year	4-year
1973	0.6	0.4	0.6	0.3	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.1
1974	0.6	0.4	0.5	0.3	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.1
1975	0.6	0.4	0.5	0.3	0.3	0.2	0.5	0.3	0.4	0.2	0.2	0.1
1976	0.6	0.4	0.6	0.3	0.2	0.2	0.5	0.3	0.5	0.2	0.2	0.1
1977	0.6	0.4	0.6	0.3	0.2	0.2	0.5	0.3	0.5	0.2	0.2	0.2
1978	0.6	0.4	0.5	0.3	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.2
1979	0.6	0.3	0.5	0.3	0.2	0.2	0.5	0.3	0.5	0.2	0.2	0.2
1980	0.6	0.4	0.5	0.2	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.2
1981	0.6	0.4	0.5	0.2	0.2	0.2	0.5	0.3	0.4	0.2	0.2	0.2
1982	0.6	0.4	0.6	0.2	0.2	0.2	0.5	0.4	0.5	0.2	0.2	0.2
1983	0.6	0.4	0.6	0.3	0.2	0.2	0.5	0.3	0.5	0.2	0.2	0.2
1984	0.6	0.4	0.6	0.2	0.2	0.2	0.5	0.3	0.5	0.2	0.2	0.2
1985	0.6	0.4	0.6	0.2	0.2	0.2	0.6	0.4	0.5	0.2	0.2	0.2
1986	0.7	0.4	0.6	0.2	0.2	0.2	0.6	0.4	0.5	0.2	0.2	0.2
1987	0.7	0.4	0.6	0.2	0.1	0.2	0.6	0.4	0.5	0.2	0.2	0.2
1988	0.7	0.5	0.7	0.2	0.1	0.2	0.6	0.4	0.6	0.2	0.2	0.2
1989	0.7	0.5	0.7	0.2	0.2	0.2	0.7	0.4	0.6	0.2	0.2	0.2
1990	0.8	0.5	0.7	0.2	0.2	0.2	0.7	0.4	0.6	0.3	0.2	0.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 8-6 Standard errors for estimated percentages in table 8-3

Year	Both sexes		Male		Female	
	16–24	25–34	16–24	25–34	16–24	25–34
1973	0.2	0.2	0.2	0.3	0.2	0.2
1974	0.2	0.2	0.2	0.3	0.2	0.2
1975	0.2	0.2	0.2	0.2	0.2	0.2
1976	0.2	0.2	0.2	0.3	0.2	0.2
1977	0.2	0.2	0.2	0.2	0.2	0.2
1978	0.2	0.2	0.2	0.2	0.2	0.2
1979	0.1	0.2	0.2	0.2	0.2	0.2
1980	0.1	0.2	0.2	0.2	0.2	0.2
1981	0.1	0.1	0.2	0.2	0.1	0.2
1982	0.2	0.2	0.2	0.2	0.2	0.2
1983	0.2	0.2	0.2	0.2	0.2	0.2
1984	0.2	0.1	0.2	0.2	0.2	0.2
1985	0.2	0.1	0.2	0.2	0.2	0.2
1986	0.2	0.1	0.2	0.2	0.2	0.1
1987	0.2	0.1	0.2	0.2	0.2	0.2
1988	0.2	0.1	0.2	0.2	0.2	0.2
1989	0.2	0.2	0.3	0.2	0.2	0.2
1990	0.2	0.1	0.2	0.2	0.2	0.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 9-1 Percentage of high school graduates 16 to 34 years old enrolled in college as undergraduates, by race/ethnicity, sex, and age: 1973–1990

Year	All		White		Black		Hispanic		Other*	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
					16–24 years old					
1973	31.6	24.0	32.0	24.1	26.8	20.9	29.5	27.3	48.4	36.9
1974	32.0	25.4	31.6	25.3	28.8	23.1	34.8	28.6	66.4	39.1
1975	32.9	27.5	32.9	26.7	31.7	30.3	34.9	33.2	34.5	36.6
1976	32.5	29.1	31.9	28.6	33.9	30.9	36.2	32.2	44.9	30.3
1977	32.7	27.7	32.4	27.1	31.5	30.1	33.9	28.8	49.3	38.4
1978	31.4	27.3	31.1	27.1	31.4	27.7	28.6	24.1	49.6	38.8
1979	30.9	28.2	30.5	28.2	30.7	27.7	33.8	26.9	44.7	33.6
1980	30.9	28.7	31.3	28.6	25.2	27.6	30.4	28.1	44.8	39.7
1981	32.1	29.2	32.1	29.4	26.7	27.3	31.6	26.3	55.6	39.9
1982	32.1	30.1	32.1	30.2	27.2	27.1	27.1	30.9	55.1	43.2
1983	32.3	29.0	32.6	29.2	26.5	25.9	31.3	30.2	48.0	35.7
1984	33.1	29.3	33.8	29.7	27.3	25.5	26.1	29.9	50.7	35.7
1985	32.9	30.8	33.8	31.8	27.5	23.5	24.7	26.7	47.4	45.8
1986	33.0	30.7	33.8	30.8	26.3	27.9	28.2	28.8	47.9	47.2
1987	35.6	31.9	36.4	32.9	29.4	25.9	29.3	25.1	54.0	47.9
1988	35.6	34.3	37.1	35.3	24.2	28.8	30.8	29.7	50.9	41.6
1989	35.7	35.4	37.7	36.3	26.2	32.4	26.3	28.9	46.0	45.4
1990	37.7	35.7	38.9	37.1	33.1	28.6	28.1	28.3	49.9	49.7
					25–34 years old					
1973	6.1	3.2	5.8	3.0	7.2	4.9	10.3	3.1	9.3	2.1
1974	6.9	3.9	6.6	3.6	10.3	6.0	7.5	5.3	7.5	5.9
1975	7.9	4.6	7.2	4.2	11.4	7.7	14.7	5.2	13.5	3.6
1976	7.0	4.4	6.3	4.0	10.8	7.4	12.7	5.2	11.1	5.0
1977	6.7	5.4	6.1	4.7	11.7	10.0	10.0	7.3	5.5	6.2
1978	5.8	4.9	5.3	4.5	8.4	8.5	9.3	5.3	8.5	5.0
1979	5.2	5.2	4.8	4.9	6.6	7.3	9.7	7.7	10.3	3.4
1980	4.9	5.6	4.5	5.5	7.1	6.8	7.9	5.3	5.3	5.3
1981	5.3	5.8	4.8	5.5	7.4	6.9	8.2	7.2	9.2	7.9
1982	5.1	5.4	4.7	4.9	6.3	7.7	7.7	6.3	8.0	6.7
1983	5.5	5.5	4.9	5.2	7.2	6.8	8.8	6.5	10.0	6.4
1984	5.0	5.5	4.5	5.2	6.3	6.1	7.0	7.9	8.1	7.1
1985	4.8	5.8	4.7	5.5	4.2	7.0	5.8	7.8	7.5	5.6
1986	5.0	5.7	4.6	5.2	6.1	6.5	5.8	9.8	8.9	7.2
1987	4.7	5.3	4.3	5.1	4.6	7.1	8.2	4.7	7.0	5.5
1988	4.6	5.4	4.4	5.2	5.0	6.3	5.1	6.5	7.3	3.9
1989	4.5	5.7	4.4	5.6	3.3	6.2	5.9	5.8	7.1	5.8
1990	4.6	6.5	4.8	6.6	2.8	6.2	4.6	6.0	7.6	7.2

* Includes persons who are not white, black, or Hispanic; most of this group are Asians, but some are American Indians.

NOTE: Undergraduates are persons enrolled in their 1st through 4th year of college.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 9-2 Percentage of high school graduates 16 to 34 years old enrolled in the 5th year or higher of college, by race/ethnicity, sex, and age: 1973–1990

Year	All		White		Black		Hispanic		Other*	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
					16–24 years old					
1973	3.6	2.1	3.8	2.2	1.8	0.9	2.5	1.3	4.0	3.5
1974	3.3	2.0	3.5	2.2	1.7	0.9	2.0	0.7	1.3	2.4
1975	3.8	2.4	4.0	2.5	1.1	1.1	3.4	1.3	6.9	5.8
1976	3.5	2.5	3.7	2.6	1.9	2.0	3.4	1.2	4.1	4.0
1977	3.3	2.5	3.5	2.7	1.3	1.3	1.7	1.0	7.4	5.8
1978	3.2	2.3	3.4	2.3	1.1	1.4	1.8	1.7	5.3	9.1
1979	2.6	2.2	2.9	2.3	0.9	1.8	0.6	1.1	1.8	2.8
1980	2.9	2.2	3.2	2.3	1.7	1.6	0.8	1.2	1.3	3.3
1981	3.0	1.8	3.1	1.9	1.9	1.5	2.0	1.8	4.0	2.3
1982	2.9	1.9	3.1	2.1	1.6	0.9	0.8	0.9	4.1	3.3
1983	3.2	2.0	3.5	2.0	1.1	1.7	1.6	1.7	5.3	2.9
1984	3.3	2.0	3.5	2.2	2.4	1.0	2.0	1.6	2.4	3.9
1985	3.1	2.0	3.4	2.2	0.7	1.2	1.8	1.7	4.1	2.7
1986	2.7	2.5	2.8	2.8	1.9	1.4	1.0	1.2	6.5	3.4
1987	2.7	2.5	2.9	2.6	1.6	2.1	1.5	0.5	4.0	6.0
1988	2.5	2.2	2.7	2.3	1.3	1.4	1.1	0.4	6.4	7.2
1989	2.7	2.6	2.8	3.0	1.3	1.5	1.3	0.8	7.4	4.1
1990	2.5	2.6	2.8	2.5	1.2	3.1	0.6	0.4	4.6	8.3
					25–34 years old					
1973	4.9	2.4	5.0	2.5	2.3	1.3	6.8	1.9	10.5	2.6
1974	4.9	3.0	4.9	3.1	3.3	2.4	5.8	1.4	10.4	3.6
1975	4.5	2.9	4.8	3.1	2.0	2.1	1.1	1.7	9.0	3.6
1976	4.9	3.0	5.1	3.1	3.5	2.5	2.9	1.6	9.5	4.3
1977	4.8	3.7	4.8	3.9	3.3	3.1	5.8	1.5	11.4	5.5
1978	4.3	3.3	4.5	3.4	2.9	1.8	3.1	2.9	5.5	4.4
1979	4.2	3.6	4.4	3.8	2.9	1.8	2.7	3.2	6.7	4.7
1980	4.0	3.3	4.0	3.4	3.6	1.9	2.3	2.8	9.2	4.8
1981	3.7	3.1	3.6	3.1	3.5	2.6	3.6	2.4	8.2	7.1
1982	3.9	3.6	4.0	3.8	2.7	2.3	2.1	3.0	6.6	3.6
1983	3.9	3.2	3.9	3.4	2.0	1.7	3.0	1.5	12.5	5.2
1984	3.8	3.1	3.7	3.3	2.7	1.1	3.0	2.1	9.0	4.7
1985	3.6	3.0	3.6	3.3	1.8	1.7	4.3	1.4	8.3	4.1
1986	3.5	2.3	3.7	2.4	1.5	1.6	3.7	1.5	7.1	3.7
1987	3.2	3.0	3.2	3.1	2.1	1.7	1.9	3.0	10.9	4.9
1988	3.1	2.9	3.1	2.9	1.2	2.2	1.2	2.7	11.9	5.2
1989	3.4	2.9	3.5	3.1	1.5	1.2	1.9	0.7	9.7	7.4
1990	3.2	2.8	3.3	2.9	1.2	1.4	1.1	2.4	10.8	6.4

* Includes persons who are not white, black, or Hispanic; most of this group are Asians, but some are American Indians.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 9-3 Standard errors for estimated percentages in table 9-1

Year	All		White		Black		Hispanic		Other	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
					16–24 years old					
1973	0.7	0.6	0.7	0.6	2.4	2.0	3.6	3.5	6.5	5.9
1974	0.7	0.6	0.7	0.6	2.5	2.1	3.6	3.2	5.6	5.4
1975	0.7	0.6	0.7	0.7	2.6	2.2	3.7	3.3	5.2	5.3
1976	0.7	0.6	0.7	0.7	2.6	2.1	3.7	3.1	5.1	4.7
1977	0.7	0.6	0.7	0.7	2.5	2.1	3.6	3.1	5.1	4.7
1978	0.7	0.6	0.7	0.7	2.5	2.0	3.3	2.9	4.9	4.8
1979	0.6	0.6	0.7	0.7	2.5	2.0	3.3	2.9	4.9	4.7
1980	0.6	0.6	0.7	0.7	2.2	2.0	3.2	2.9	4.9	4.6
1981	0.6	0.6	0.7	0.7	2.2	1.9	3.2	2.6	4.4	4.4
1982	0.7	0.6	0.7	0.7	2.3	2.0	3.1	2.9	4.1	4.6
1983	0.7	0.6	0.8	0.7	2.3	2.0	3.4	2.9	4.4	4.2
1984	0.7	0.6	0.8	0.7	2.2	1.9	3.0	2.9	4.5	4.2
1985	0.7	0.7	0.8	0.7	2.3	1.9	3.9	3.8	4.5	4.2
1986	0.7	0.7	0.8	0.8	2.3	2.0	3.8	3.9	4.2	4.1
1987	0.7	0.7	0.8	0.8	2.4	2.0	3.7	3.6	4.1	4.1
1988	0.8	0.8	0.9	0.9	2.4	2.3	4.7	4.6	4.3	4.3
1989	0.8	0.8	0.9	0.9	2.5	2.3	4.4	4.3	4.7	4.7
1990	0.8	0.8	0.9	0.9	2.6	2.3	4.4	4.5	4.4	4.3
					25–34 years old					
1973	0.3	0.2	0.4	0.3	2.1	1.6	2.6	1.4	3.2	1.5
1974	0.3	0.3	0.4	0.3	2.3	1.7	2.1	1.8	2.7	2.3
1975	0.4	0.3	0.4	0.3	2.4	1.9	2.5	1.5	3.3	1.6
1976	0.3	0.3	0.4	0.3	2.3	1.7	2.4	1.5	2.8	1.9
1977	0.3	0.3	0.4	0.3	2.3	1.9	2.1	1.8	2.1	2.0
1978	0.3	0.3	0.4	0.3	1.9	1.7	2.0	1.5	2.5	1.7
1979	0.3	0.3	0.3	0.3	1.7	1.6	2.0	1.7	2.6	1.4
1980	0.3	0.3	0.3	0.3	1.7	1.5	1.6	1.4	1.9	1.7
1981	0.3	0.3	0.3	0.3	1.6	1.4	1.5	1.5	2.1	1.8
1982	0.3	0.3	0.3	0.3	1.5	1.5	1.6	1.4	1.9	1.6
1983	0.3	0.3	0.3	0.3	1.6	1.4	1.6	1.4	2.0	1.6
1984	0.3	0.3	0.3	0.3	1.5	1.3	1.5	1.5	1.7	1.6
1985	0.3	0.3	0.3	0.3	1.2	1.4	1.7	2.0	1.7	1.4
1986	0.3	0.3	0.3	0.3	1.4	1.3	1.7	2.1	1.9	1.6
1987	0.2	0.3	0.3	0.3	1.2	1.4	1.9	1.5	1.6	1.4
1988	0.3	0.3	0.3	0.4	1.3	1.4	1.8	2.0	1.8	1.2
1989	0.3	0.3	0.3	0.4	1.1	1.4	1.9	1.9	1.7	1.5
1990	0.3	0.3	0.3	0.4	1.0	1.4	1.7	1.9	1.8	1.7

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 9-4 Standard errors for estimated percentages in table 9-2

Year	All		White		Black		Hispanic		Other	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
					16–24 years old					
1973	0.3	0.2	0.3	0.2	0.5	0.3	1.9	1.4	2.5	2.2
1974	0.3	0.2	0.3	0.2	0.5	0.3	1.6	0.9	1.4	1.7
1975	0.3	0.2	0.3	0.2	0.4	0.3	2.2	1.2	2.8	2.6
1976	0.3	0.2	0.3	0.2	0.5	0.4	2.2	1.1	2.0	2.0
1977	0.3	0.2	0.3	0.2	0.4	0.3	1.5	1.1	2.7	2.3
1978	0.2	0.2	0.3	0.2	0.4	0.3	1.5	1.3	2.2	2.8
1979	0.2	0.2	0.3	0.2	0.3	0.4	0.9	1.1	1.3	1.7
1980	0.2	0.2	0.3	0.2	0.4	0.4	0.9	1.1	1.1	1.7
1981	0.2	0.2	0.3	0.2	0.4	0.3	1.5	1.2	1.7	1.4
1982	0.2	0.2	0.3	0.2	0.4	0.3	1.0	0.9	1.6	1.7
1983	0.3	0.2	0.3	0.2	0.4	0.4	1.4	1.3	2.0	1.5
1984	0.3	0.2	0.3	0.2	0.5	0.3	1.5	1.2	1.4	1.7
1985	0.3	0.2	0.3	0.2	0.4	0.5	1.3	1.2	1.8	1.4
1986	0.2	0.2	0.3	0.3	0.6	0.5	0.9	1.0	2.1	1.5
1987	0.2	0.2	0.3	0.3	0.6	0.6	1.1	0.6	1.6	2.0
1988	0.3	0.2	0.3	0.3	0.6	0.6	1.0	0.6	2.1	2.3
1989	0.3	0.3	0.3	0.3	0.6	0.6	1.1	0.9	2.5	1.9
1990	0.3	0.3	0.3	0.3	0.6	0.9	0.8	0.6	1.8	2.4
					25–34 years old					
1973	0.3	0.2	0.3	0.2	0.5	0.4	3.4	1.8	3.4	1.7
1974	0.3	0.2	0.3	0.2	0.6	0.5	2.9	1.5	3.1	1.8
1975	0.3	0.2	0.3	0.2	0.5	0.5	1.2	1.4	2.8	1.6
1976	0.3	0.2	0.3	0.2	0.6	0.5	1.8	1.3	2.7	1.8
1977	0.3	0.2	0.3	0.3	0.6	0.5	2.5	1.3	2.9	1.9
1978	0.3	0.2	0.3	0.2	0.5	0.4	1.8	1.7	2.0	1.6
1979	0.2	0.2	0.3	0.3	0.5	0.4	1.7	1.7	2.1	1.6
1980	0.2	0.2	0.3	0.2	0.6	0.4	1.4	1.6	2.4	1.6
1981	0.2	0.2	0.2	0.2	0.5	0.4	1.6	1.4	2.0	1.7
1982	0.2	0.2	0.3	0.2	0.5	0.4	1.4	1.6	1.7	1.2
1983	0.2	0.2	0.3	0.2	0.4	0.3	1.5	1.1	2.2	1.4
1984	0.2	0.2	0.2	0.2	0.4	0.3	1.6	1.2	1.8	1.4
1985	0.2	0.2	0.2	0.2	0.5	0.5	1.6	0.9	1.7	1.3
1986	0.2	0.2	0.2	0.2	0.5	0.4	1.5	0.9	1.7	1.2
1987	0.2	0.2	0.2	0.2	0.6	0.4	1.0	1.3	2.0	1.3
1988	0.2	0.2	0.2	0.2	0.5	0.6	0.9	1.3	2.2	1.4
1989	0.2	0.2	0.3	0.2	0.5	0.4	1.1	0.7	2.0	1.7
1990	0.2	0.2	0.2	0.2	0.5	0.5	0.8	1.3	2.1	1.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 10-1 Standard errors for estimated percentages and numbers in text table for *Indicator 10*

Control	Percent of private elementary schools	Elementary				Percent of private secondary schools	Secondary			
		Private school tuition					Private school tuition			
		Average	Percentile distribution				Average	Percentile distribution		
			25th	50th	75th			25th	50th	75th
Catholic	1.7	64.1	71.6	70.8	175.2	3.1	83.9	336.8	306.2	526.9
Parochial	1.6	61.1	66.9	61.5	172.4	1.9	386.2	—	—	—
Diocesan	0.9	103.3	150.4	130.4	258.6	3.5	301.0	493.5	470.5	763.0
Private	0.8	913.3	—	—	—	2.7	319.7	660.8	544.6	1,026.9
Other religious	3.8	63.1	105.0	112.5	258.7	3.2	367.1	596.9	515.1	977.7
Conservative Christian	1.0	155.4	283.0	230.7	518.8	1.8	587.6	—	—	—
Affiliated	1.6	97.9	120.2	140.2	332.4	1.5	418.6	724.7	617.0	1,032.1
Unaffiliated	3.5	140.0	312.6	253.2	577.8	1.7	1,335.9	—	—	—
Nonsectarian	1.3	351.9	472.6	572.5	787.8	3.1	1,204.2	1,334.5	2,123.0	2,293.1
Regular	1.2	487.2	905.9	833.8	1,079.7	1.8	1,058.5	—	—	—
Special emphasis	0.8	511.2	588.0	629.8	1,045.7	2.4	2,369.9	—	—	—
Special education	0.1	5,441.9	—	—	—	—	—	—	—	—

— Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987.

Note on private school categorizations

Past classification schemes for private schools produced by the National Center for Education Statistics (NCES) have usually included three categories: Catholic, other religious, and nonsectarian. These classifications have some utility, but they may mask the full range of diversity within the universe of private schools.

In 1987, NCES commissioned a report to recommend an expanded set of categories to guide analysis and reporting, as well as development of additional survey items to facilitate the assignment of schools to categories within the typology. The resulting typology begins with the earlier three-group categorization (Catholic, other religious, and nonsectarian), and further subdivides each group into three additional groups. In the Schools and Staffing Survey, each school was self-categorized according to governance, affiliation, curricular orientation, or other characteristics.

Among Catholic schools:

Parochial schools are schools governed by the local Catholic parish.

Diocesan schools are schools governed by the local Catholic diocese, under the authority of the local bishop.

Private schools are schools independently governed by the individual school, or a religious order, not under the direct authority of a local bishop or parish.

Among other religious schools:

Conservative Christian schools are schools typically affiliated with a Christian school association (e.g., Accelerated Christian Education, American Association of Christian Schools, Association of Christian Schools International, or Oral Roberts Educational Fellowship). Schools in this type of category are commonly known as evangelical or fundamental, and are not tied to a denomination per se, but rather governed by a single church, a foundation, or a local society.

Affiliated are any religious schools associated with major denomination (e.g., Lutheran, Jewish, Seven-day Adventist, etc.).

Unaffiliated are those religious schools which affiliate with neither a national denomination nor with a conservative Christian school association.

Among nonsectarian schools:

Regular schools offer a conventional academic program.

Special emphasis schools provide a program with a special stress (e.g., arts, vocational, alternative, etc.).

Special education schools serve the needs of children in special education programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Diversity Among Private Schools*, 1992.

Table 11-1 Average undergraduate tuition, room, and board as a percentage of income of families with children all 6-17 years old, at selected family income percentiles, by control of institution: 1975–1990

Year	Public institutions					Private institutions				
	Family income percentile					Family income percentile				
	10th	25th	50th	75th	90th	10th	25th	50th	75th	90th
1975	32.1	16.9	10.5	7.5	5.5	70.5	37.2	23.2	16.4	12.2
1976	32.6	16.8	10.3	7.4	5.5	71.1	36.7	22.5	16.1	11.9
1977	32.3	16.8	10.2	7.2	5.4	71.1	37.0	22.4	15.9	11.8
1978	31.7	16.3	9.9	7.1	5.2	71.7	37.0	22.3	16.2	11.8
1979	30.9	16.2	9.7	6.8	4.9	70.1	36.7	22.1	15.4	11.2
1980	29.8	17.1	10.1	6.9	5.0	68.8	39.5	23.2	15.9	11.6
1981	30.3	18.3	10.5	7.2	5.3	70.2	42.4	24.4	16.7	12.2
1982	31.6	19.8	11.2	7.6	5.5	74.3	46.6	26.4	17.8	12.9
1983	32.8	20.8	11.7	7.7	5.6	78.1	49.5	27.9	18.3	13.2
1984	34.0	20.8	11.9	7.8	5.6	81.8	50.2	28.7	18.8	13.5
1985	34.4	20.6	11.6	7.8	5.6	85.6	51.1	28.9	19.4	13.9
1986	36.0	21.6	12.0	7.9	5.7	91.4	55.0	30.6	20.1	14.4
1987	36.9	22.1	12.1	7.9	5.7	95.8	57.3	31.4	20.6	14.8
1988	37.4	22.0	12.3	8.0	5.8	98.0	57.6	32.1	21.1	15.2
1989	37.6	21.9	12.3	8.1	5.7	100.4	58.5	32.9	21.7	15.3
1990	37.7	22.7	12.9	8.4	5.9	102.4	61.7	35.0	22.8	16.0

NOTE: Tuition data are for academic years beginning 1975–1990 and family income data are for calendar years 1975–1990.

Table 11-2 Average undergraduate tuition, room, and board in constant 1991 dollars and as a percentage of the income of all families at selected family income percentiles, by control of institution: 1964–1990

Year	Public institutions				Private institutions			
	Constant dollars	Family income percentile			Constant dollars	Family income percentile		
		20th	50th	80th		20th	50th	80th
1964	$4,166	29.0	14.4	9.2	$8,362	58.3	28.8	18.6
1965	4,243	27.7	14.0	9.0	8,654	56.6	28.5	18.3
1966	4,312	25.6	13.4	8.7	8,927	53.1	27.7	17.9
1967	4,338	25.5	13.2	8.5	8,990	52.8	27.3	17.6
1968	4,367	24.0	12.6	8.1	9,075	49.8	26.2	16.9
1969	4,460	23.4	12.4	7.9	9,380	49.1	26.0	16.7
1970	4,508	24.7	12.7	8.1	9,591	52.5	27.1	17.2
1971	4,558	25.6	13.0	8.2	9,797	55.1	27.9	17.7
1972	4,742	25.4	12.8	8.0	9,880	52.9	26.7	16.7
1973	4,647	23.8	12.0	7.5	9,692	49.5	25.0	15.6
1974	4,311	22.5	11.5	7.2	9,386	48.9	25.1	15.7
1975	4,210	23.4	11.8	7.3	9,257	51.4	25.9	16.1
1976	4,275	23.3	11.6	7.3	9,335	50.9	25.3	15.8
1977	4,237	23.1	11.4	7.0	9,330	50.9	25.1	15.5
1978	4,157	21.8	10.8	6.6	9,411	49.3	24.4	15.0
1979	4,057	20.7	10.3	6.4	9,205	46.9	23.4	14.6
1980	3,916	21.9	10.7	6.5	9,027	50.6	24.7	15.1
1981	3,983	23.6	11.5	6.9	9,223	54.6	26.6	15.9
1982	4,150	25.9	12.4	7.2	9,753	60.7	29.0	17.0
1983	4,309	26.4	12.5	7.4	10,252	62.9	29.8	17.5
1984	4,462	26.8	12.7	7.4	10,738	64.5	30.5	17.8
1985	4,515	26.8	12.7	7.4	11,234	66.6	31.7	18.3
1986	4,721	27.0	12.7	7.4	12,006	68.7	32.4	18.9
1987	4,848	27.5	12.9	7.5	12,582	71.4	33.4	19.5
1988	4,915	27.6	13.0	7.5	12,868	72.3	33.9	19.5
1989	4,941	27.5	12.9	7.4	13,185	73.3	34.3	19.7
1990	4,951	27.6	13.1	7.5	13,438	74.8	35.6	20.5

NOTE: Tuition data are for academic years beginning 1964–1990 and family income data are for calendar years 1964–1990. The calendar year Consumer Price Index was used to calculate constant dollar figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1991, table 291. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports* , Series P-60, Money Income of Families and Persons: March...," various years (based on the March supplement to the Current Population Survey).

Table 12-1 Average reading proficiency by parents' highest level of education: 1971–1990

Parent's highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school	1971	[1]10	189	[1]16	238	[1]20	261
	1975	[1]10	190	[1]14	239	[1,2]16	263
	1980	[2]7	194	[1,2]10	239	[1,2]13	262
	1984	[2]6	[2]195	[2]9	240	[1,2]12	[2]269
	1988	[2]5	193	[2]8	[2]247	9	267
	1990	[2]5	193	[2]8	241	9	270
Graduated from high school	1971	[1]22	208	32	[1]256	31	283
	1975	[1]24	211	33	255	[1]34	281
	1980	[1,2]25	213	31	254	32	[1,2]278
	1984	[2]19	209	[1]35	253	[1]35	281
	1988	[2]16	211	31	253	30	282
	1990	[2]17	209	31	251	30	283
More than high school	1971	[1]33	224	[1]38	270	[1]42	302
	1975	[1]34	222	[1]40	270	[1]46	301
	1980	[2]40	[1]226	[2]49	[1]271	[1]51	299
	1984	[1]36	223	[2]45	268	[1]50	301
	1988	[2]45	220	[2]52	[2]265	[2]58	300
	1990	[2]42	218	[2]50	267	[2]58	300

[1] Statistically significant difference from 1990.

[2] Statistically different from 1971.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are about one-third of students who did not know their parent's highest level of education.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-2 Average reading proficiency and time spent on homework: 1984 and 1990

Amount of homework	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
None	1984	36	213	23	254	22	276
	1990	31	208	21	252	23	274
Didn't do assigned homework	1984	4	199	4	247	•11	287
	1990	5	187	5	244	13	288
Less than 1 hour	1984	42	218	36	261	26	290
	1990	46	214	37	258	28	291
1—2 hours	1984	13	216	29	266	27	296
	1990	12	214	28	265	25	300
More than 2 hours	1984	6	201	9	265	13	303
	1990	6	194	8	262	12	307

• Statistically significant difference from 1990.

NOTE: Percentage of students represents the proportion of all students from each subgroup.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-3 Trends in the percentage of students at or above five reading levels, by race/ethnicity: 1975 and 1990

Reading proficiency levels	Age	1975			1990		
		White	Black	Hispanic	White	Black	Hispanic
Level 150	9	96	81	81	94	77	84
	13	100	98	100	100	99	99
	17	100	98	99	100	100	100
Level 200	9	69	32	35	66	34	41
	13	96	•77	81	96	88	86
	17	99	•82	89	99	96	96
Level 250	9	•17	2	3	23	5	6
	13	66	•25	32	65	42	37
	17	86	•43	•53	88	69	75
Level 300	9	1	0	0	2	0	0
	13	12	2	2	13	5	4
	17	44	•8	•13	48	20	27
Level 350	9	0	0	0	0	0	0
	13	0	0	0	1	0	0
	17	7	0	1	9	2	2

• Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-4 Percentage of students ages 9, 13, or 17 scoring at or above the five levels of reading proficiency: 1971–1990

Year	Level 150			Level 200			Level 250			Level 300			Level 350		
	Age			Age			Age			Age			Age		
	9	13	17	9	13	17	9	13	17	9	13	17	9	13	17
1971	91	100	100	59	93	96	16	58	•79	1	10	39	0	0	7
1975	•93	100	100	62	93	96	•15	59	•80	1	10	39	0	0	6
1980	95	100	100	•68	95	97	18	61	81	1	11	38	0	0	5
1984	92	100	100	62	94	98	17	59	83	1	11	40	0	0	6
1988	93	100	100	63	95	99	18	59	86	1	11	41	0	0	5
1990	90	100	100	59	94	98	18	59	84	2	11	41	0	0	7

•Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-5 Standard errors for estimated scale scores in text table for *Indicator 12*

Year	Age 9				Age 13				Age 17			
	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1971	1.0	0.9	1.7	—	0.9	0.7	1.2	—	1.2	1.0	1.7	—
1975	0.7	0.7	1.2	2.2	0.8	0.7	1.2	3.0	0.8	0.6	2.0	3.6
1980	1.0	0.8	1.8	2.3	0.9	0.7	1.5	2.0	1.2	0.9	1.8	2.7
1984	0.7	0.8	1.1	2.1	0.5	0.6	1.0	1.7	0.6	0.7	1.0	2.2
1988	1.1	1.4	2.4	3.5	1.0	1.1	2.4	3.5	1.0	1.2	2.4	4.3
1990	1.2	1.3	2.9	2.3	0.8	0.9	2.2	2.3	1.1	1.2	2.3	3.6

Year	Age 9		Age 13		Age 17	
	Male	Female	Male	Female	Male	Female
1971	1.1	1.0	1.0	0.9	1.2	1.3
1975	0.8	0.8	0.8	0.9	1.0	1.0
1980	1.1	1.1	1.1	0.9	1.3	1.2
1984	0.8	0.8	0.6	0.6	0.6	0.8
1988	1.4	1.3	1.3	1.0	1.5	1.5
1990	1.7	1.2	1.1	1.1	1.6	1.2

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-6 Standard errors for estimated percentages and scale scores in table 12-1

Parents' highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school	1971	0.4	1.5	0.6	1.3	0.8	1.5
	1975	0.4	1.3	0.6	1.2	0.6	1.3
	1980	0.5	1.6	0.6	1.1	0.7	1.5
	1984	0.2	1.4	0.4	0.9	0.6	1.1
	1988	0.6	4.9	0.6	2.1	0.8	2.0
	1990	0.5	3.2	0.6	1.8	0.6	2.8
Graduated from high school	1971	0.5	1.2	0.7	0.8	0.8	1.2
	1975	0.4	0.9	0.6	0.7	0.5	1.1
	1980	0.8	1.3	0.7	0.9	0.9	1.0
	1984	0.6	1.0	1.1	0.7	1.1	0.7
	1988	0.6	2.2	1.0	1.2	1.2	1.3
	1990	0.8	1.8	1.2	0.9	1.0	1.4
More than high school	1971	0.9	1.1	1.1	0.8	1.3	1.0
	1975	0.7	0.9	0.9	0.8	0.8	0.7
	1980	1.5	1.1	1.3	0.8	1.3	1.0
	1984	1.0	0.9	1.1	0.7	1.2	0.7
	1988	1.4	1.7	1.5	1.4	1.6	1.3
	1990	1.3	2.0	1.5	1.0	1.3	1.1

NOTE: Percentage of students represents the proportion of all students from each subgroup.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-7 Standard errors for estimated percentages and scale scores for table 12-2

Amount of homework	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
None	1984	1.3	0.9	0.8	0.8	0.9	0.7
	1990	1.9	1.5	1.1	1.9	1.0	2.0
Didn't do assigned homework	1984	0.3	2.1	0.2	1.7	0.3	1.2
	1990	0.4	4.8	0.5	3.2	0.6	2.3
Less than 1 hour	1984	1.0	0.7	0.7	0.6	0.4	0.8
	1990	1.6	1.7	0.9	1.1	0.9	1.6
1-2 hours	1984	0.5	1.3	0.5	0.7	0.5	0.8
	1990	0.6	2.8	1.0	1.6	0.7	1.4
More than 2 hours	1984	0.2	1.8	0.3	1.2	0.6	1.1
	1990	0.5	3.5	0.5	2.2	0.7	2.6

NOTE: Percentage of students represents the proportion of all students from each subgroup.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970-90, Mathematics, 1973-90, Reading, 1971-90, Writing, 1984-90*, 1991.

Table 12-8 Standard errors for estimated percentages in table 12-3

Reading skills and levels	Age	1975				1990			
		Total	White	Black	Hispanic	Total	White	Black	Hispanic
Level 150	9	0.4	0.3	1.1	2.5	0.9	0.9	2.7	1.8
	13	0.1	0.0	0.3	0.3	0.1	0.1	0.5	0.5
	17	0.1	0.0	0.8	0.4	0.1	0.0	0.8	0.0
Level 200	9	0.8	0.8	1.5	3.0	1.3	1.4	3.4	2.7
	13	0.4	0.2	1.3	2.3	0.6	0.6	2.3	2.4
	17	0.3	0.1	1.8	2.4	0.3	0.2	1.3	2.1
Level 250	9	0.6	0.7	0.3	0.5	1.0	1.2	1.5	2.0
	13	1.0	0.9	1.6	3.6	1.0	1.2	3.5	2.9
	17	0.7	0.6	1.6	4.1	1.0	1.1	2.8	4.7
Level 300	9	0.1	0.1	0.0	0.0	0.3	0.4	0.2	0.3
	13	0.5	0.5	0.3	1.0	0.6	0.9	0.8	1.2
	17	0.8	0.8	0.7	2.7	1.0	1.2	1.8	3.3
Level 350	9	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	13	0.0	0.1	0.0	0.0	0.1	0.2	0.3	0.2
	17	0.3	0.4	0.3	0.6	0.5	0.6	1.0	1.4

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

Table 12-9 Standard errors for estimated percentages in table 12-4

Year	Level 150			Level 200			Level 250			Level 300			Level 350		
	Age			Age			Age			Age			Age		
	9	13	17	9	13	17	9	13	17	9	13	17	9	13	17
1971	0.5	0.0	0.1	1.0	0.5	0.3	0.6	1.1	0.9	0.1	0.5	1.0	0.0	0.0	0.4
1975	0.4	0.1	0.1	0.8	0.4	0.3	0.6	1.0	0.7	0.1	0.5	0.8	0.0	0.0	0.3
1980	0.4	0.0	0.1	1.0	0.4	0.3	0.8	1.1	0.9	0.1	0.5	1.1	0.0	0.0	0.4
1984	0.3	0.0	0.0	0.7	0.3	0.1	0.6	0.6	0.5	0.1	0.4	0.8	0.0	0.1	0.3
1988	0.7	0.1	0.0	1.3	0.6	0.3	1.1	1.3	0.8	0.3	0.8	1.5	0.0	0.1	0.6
1990	0.9	0.1	0.1	1.3	0.6	0.3	1.0	1.0	1.0	0.3	0.6	1.0	0.1	0.1	0.5

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1970–90, Mathematics, 1973–90, Reading, 1971–90, Writing, 1984–90*, 1991.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, table 291. U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-60, Money Income of Families and Persons: March....," various years (based on the March supplement to the Current Population Survey).

Table 13-1 Average writing achievement, by type of community: 1984–1990

Type of community	Year	Grade 4		Grade 8		Grade 11	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Advantaged urban							
	1984	13	197	12	222	16	202
	1988	14	199	14	208	17	216
	1990	11	195	11	217	11	221
Disadvantaged Urban							
	1984	13	167	8	193	11	194
	1988	8	158	7	189	1	*177
	1990	10	159	9	189	9	196
Extreme rural							
	1984	7	*154	5	203	6	206
	1988	10	185	6	205	7	215
	1990	10	186	10	200	13	211
Other							
	1984	68	180	75	*206	67	214
	1988	68	186	73	*203	75	214
	1990	70	184	70	195	67	212

* Statistically significant difference from 1990.

NOTE: Percent of students represents the percentage of all students from each subgroup.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 13-2 Average writing achievement, by parents' highest level of education: 1984–1990

Parents' highest level of education	Year	Grade 4		Grade 8		Grade 11	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Did not finish high school	1984	7	157	10	196	11	200
	1988	5	158	9	195	8	*202
	1990	5	169	8	192	9	190
Graduated high school	1984	20	171	35	*203	35	207
	1988	18	183	32	198	30	211
	1990	19	183	33	195	30	205
Post high school	1984	5	187	10	210	15	218
	1988	5	179	11	213	18	217
	1990	5	195	12	207	19	215
Graduated college	1984	33	193	36	*215	36	220
	1988	42	195	41	208	41	220
	1990	39	191	38	204	41	221

* Statistically significant difference from 1990.

NOTE: Percentage of students represents the proportion of all students from each subgroup. Not shown are about one-third of students who did not know their parent's highest level of education.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 13-3 Standard errors for estimated scale scores in text table for *Indicator 13*

Year	Grade 4				Grade 8				Grade 11			
	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1984	2.2	2.6	4.3	3.5	1.4	1.6	3.6	5.7	1.7	2.2	4.4	3.9
1988	1.8	2.1	3.6	4.4	1.3	1.3	3.4	3.8	1.4	1.6	2.8	4.2
1990	1.5	1.6	4.8	3.4	1.8	1.5	2.8	3.0	1.3	1.5	2.3	3.9

Year	Grade 4		Grade 8		Grade 11	
	Male	Female	Male	Female	Male	Female
1984	3.0	2.6	1.8	1.9	2.7	2.0
1988	2.8	1.8	2.1	1.4	1.9	1.6
1990	1.6	2.2	1.6	1.5	2.0	1.4

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 13-4 Standard errors for estimated percentages and scale scores for table 13-1

Type of community	Year	Grade 4		Grade 8		Grade 11	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Advantaged urban	1984	2.4	3.8	2.6	5.7	2.6	4.7
	1988	2.3	6.1	3.7	3.0	4.0	3.7
	1990	2.1	4.8	1.9	3.5	1.8	5.2
Disadvantaged urban	1984	2.0	4.1	1.3	4.3	2.1	4.4
	1988	2.6	4.8	2.1	2.7	0.8	1.7
	1990	3.0	6.8	1.5	3.2	2.2	4.4
Extreme rural	1984	1.2	10.9	1.1	4.8	1.2	8.3
	1988	2.5	4.8	1.8	5.6	2.8	3.6
	1990	2.3	4.8	2.9	5.4	1.9	4.9
Other	1984	2.1	2.8	2.5	1.6	2.0	1.8
	1988	4.2	2.4	4.3	1.8	5.0	1.5
	1990	3.4	1.9	3.2	1.7	3.3	1.4

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 13-5 Standard errors for estimated percentages and scale scores for table 13-2

Parents' highest level of education	Year	Grade 4		Grade 8		Grade 11	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Didn't finish high School	1984	0.6	6.0	0.8	4.5	1.2	4.0
	1988	0.6	8.4	0.7	3.9	0.8	3.7
	1990	0.4	4.9	0.6	3.7	0.5	3.3
Graduated high school	1984	0.9	4.6	1.3	2.6	21	2.3
	1988	1.1	3.2	1.2	2.2	1.2	1.4
	1990	0.8	2.8	1.1	1.9	1.1	2.3
Post high school	1984	0.4	5.5	0.8	5.2	0.9	4.5
	1988	0.4	6.6	0.6	3.2	0.8	2.4
	1990	0.4	5.9	0.7	2.7	0.6	2.3
Graduated college	1984	1.4	2.2	1.5	2.7	1.7	3.0
	1988	1.4	2.2	1.5	2.3	1.8	2.1
	1990	1.5	2.3	1.5	2.0	1.4	1.8

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-1 Average mathematics proficiency, by parents' highest level of education: 1978–1990

Parents' highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school							
	1978	[1]8	[1]200	[1]12	[1]245	[1]13	280
	1982	[1]8	[1]199	[1]11	[2]251	[1]14	279
	1986	[2]4	[1]201	28	[2]252	28	279
	1990	[2]5	[2]210	28	[2]253	28	285
Graduated from high school							
	1978	[1]23	[1]219	[1]33	263	133	294
	1982	[1]25	[1]218	[1]34	263	133	293
	1986	[2]16	[1]218	31	263	228	293
	1990	[2]16	[2]226	[2]27	263	226	294
More than high school							
	1978	9	230	[1]14	273	[1]16	305
	1982	[1]9	[1]225	[1]14	275	[1]18	[1]304
	1986	[2]7	229	15	274	[2]24	305
	1990	7	[2]236	[2]17	277	[2]24	308
Graduated from college							
	1978	[1]24	[1]231	[1]26	284	[1]32	317
	1982	[1,2]30	[1]229	[1,2]32	282	[1]32	[2]312
	1986	[2]38	[1]231	[2]37	280	37	314
	1990	[2]40	[2]238	[2]41	280	[2]39	316

[1] Statistically significant difference from 1990.
[2] Statistically significant difference from 1978.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are about one-third of students who did not know their parent's highest level of education.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-2 Mathematics classroom activities and mathematics proficiency at age 17: 1978 and 1990

Classroom activity/year	Frequency of Activity					
	Often		Sometimes		Never	
	Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Listen to a teacher explain a mathematics lesson.						
1978	79	304	*19	294	2	282
1990	84	308	13	293	3	284
Discuss mathematics in class.						
1978	*51	306	*43	298	7	289
1990	63	309	31	302	7	291
Watch the teacher work mathematics problems on the board.						
1978	*80	304	*18	292	2	282
1990	85	309	12	291	3	279
Work mathematics problems on the board.						
1978	28	303	*60	302	*12	293
1990	28	307	52	307	21	301
Make reports or do projects on mathematics.						
1978	2	286	23	300	75	302
1990	5	306	23	308	72	305
Take mathematics tests.						
1978	*64	308	*33	292	3	270
1990	84	308	14	298	2	268

* Statistically significant difference from 1990.

NOTE: Percent of students represents the proportion of all students from each subgroup.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990,* 1991.

Table 14-3 Average mathematics proficiency and highest level of mathematics course taken at age 17, by race/ethnicitiy and sex: 1978 and 1990

Highest level of math taken/year	Nation	White	Black	Hispanic	Male	Female
Prealgebra or general mathematiacs						
1978 Percent	*20	18	*31	*36	*21	*20
Proficiency	*267	*272	*247	256	269	*265
1990 Percent	15	15	16	21	16	14
Proficiency	273	277	264	259	274	271
Algebra I						
1978 Percent	17	17	19	19	15	18
Proficiency	286	291	*264	273	289	284
1990 Percent	15	15	16	24	16	15
Proficiency	288	292	278	278	291	285
Geometry						
1978 Percent	16	17	11	12	15	18
Proficiency	*307	*310	281	294	*310	*304
1990 Percent	15	15	17	13	16	14
Proficiency	299	304	285	286	302	296
Algebra II						
1978 Percent	*37	*39	*28	23	38	*37
Proficiency	321	325	*292	303	325	318
1990 Percent	44	46	41	32	42	47
Proficiency	319	323	302	306	323	316
Precalculus or calculus						
1978 Percent	6	6	4	3	7	4
Proficiency	*334	*338	*297	306	*337	*329
1990 Percent	8	8	6	7	8	8
Proficiency	344	347	329	323	347	341

* Statistically significant difference from 1990.

NOTE: Percentage of students represents the proportion of all students from each subgroup.
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-4 Percentage of all students age 9, 13, and 17 at or above the five levels of mathematics proficiency: 1978–1990

Year	Level 150			Level 200			Level 250			Level 300			Level 350		
	Age			Age			Age			Age			Age		
	9	13	17	9	13	17	9	13	17	9	13	17	9	13	17
1978	97	100	100	*70	95	100	*20	*65	92	1	18	*52	0	1	7
1982	97	100	100	*71	98	100	*19	71	93	1	17	*49	0	1	6
1986	98	100	100	*74	99	100	*21	73	96	1	16	52	0	0	7
1990	99	100	100	82	99	100	28	75	96	1	17	56	0	0	7

* Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-5 Average eighth-grade NAEP mathematics performance of public school students, by state: 1990

State	Average proficiency	Numbers and operations	Measurement	Geometry	Data analysis, statistics, and probability	Algebra and functions
Nation	**261**	**266**	**258**	**259**	**262**	**260**
Northeast	269	271	266	268	273	267
Southeast	253	259	246	249	250	254
Central	265	270	263	262	265	263
West	261	264	258	260	262	259
Alabama	252	259	247	248	251	251
Arizona	259	264	257	256	258	258
Arkansas	256	262	253	253	254	253
California	256	259	252	255	254	256
Colorado	267	269	265	266	269	266
Connecticut	270	273	269	266	272	268
Delaware	261	265	258	256	261	260
District of Columbia	231	238	221	229	222	235
Florida	255	260	251	251	255	255
Georgia	258	263	252	256	260	257
Hawaii	251	256	249	252	242	249
Idaho	272	274	270	269	274	269
Illionois	260	265	256	256	262	260
Indiana	267	271	263	264	269	265
Iowa	278	283	277	275	281	274
Kentucky	256	261	253	253	257	256
Louisana	246	253	241	242	243	245
Maryland	260	264	256	256	260	263
Michigan	264	268	260	262	264	264
Minnesota	276	279	272	273	279	274
Montana	280	282	279	280	282	278
Nebraska	276	279	274	273	279	273
New Hampshire	273	275	272	272	276	271
New Jersey	269	274	267	266	270	268
New Mexico	256	258	253	257	253	256
New York	261	263	255	259	263	260
North Carolina	250	255	241	249	247	251
North Dakota	281	286	280	278	286	275
Ohio	264	268	259	260	266	262
Oklahoma	263	268	258	259	264	262
Oregon	271	273	269	270	274	270
Pennsylvania	266	270	265	263	268	265
Rhode Island	260	264	256	256	258	261
Texas	258	262	253	258	256	256
Virgina	264	268	259	261	264	265
West Virginia	256	260	252	254	256	254
Wisconsin	274	278	273	272	277	271
Wyoming	272	275	270	270	274	270
Guam	231	239	227	236	213	230
Virgin Islands	218	227	214	222	196	218

NOTE: As part of the 1990 mathematics assessment of 4th-, 8th-, and 12th-graders, a new dimension was added to NAEP whereby states (and the District of Columbia) and territories could, on a voluntary basis participate in the mathematics assessment of 8th-graders. This assessment was designed to provide state-level data comparable to results for the nation and other participating states and territories. The Trial State Assessment Program provides information about mathematics achievement as well as programs and practices in mathematics instruction. The materials were given to representative samples of students across the country including 26,000 students in 1,300 private and public schools nationally and, in addition to approximately 2,500 students in about 100 public schools in each of the 40 participating states and territories.

SOURCE: National Assessment of Educational Progress, *The State of Mathematics Achievement: NAEP's 1990 Assessment of the Nation and the Trial Assessment of the States*, 1991.

Table 14-6 Standard errors for estimated scale scores in text table for *Indicator 14*

Year	Age 9				Age 13				Age 17			
	All races	White	Black	His-panic	All races	White	Black	His-panic	All races	White	Black	His-panic
1973	0.8	1.0	1.8	2.4	0.8	0.9	1.9	2.2	1.1	1.1	1.3	2.2
1978	0.8	0.9	1.1	2.2	0.8	0.8	1.9	2.0	1.0	0.9	1.3	2.3
1982	1.1	1.1	1.6	1.3	1.1	1.0	1.6	1.7	0.9	0.9	1.2	1.8
1986	1.0	1.1	1.6	2.1	1.0	1.3	2.3	2.9	0.9	1.0	2.1	2.9
1990	0.8	0.8	2.2	2.1	0.8	1.1	2.3	1.8	0.9	1.0	2.8	2.9

Year	Age 9		Age 13		Age 17	
	Male	Female	Male	Female	Male	Female
1973	0.7	1.1	1.3	1.1	1.2	1.1
1978	0.7	1.0	1.3	1.1	1.0	1.0
1982	1.2	1.2	1.4	1.1	1.0	1.0
1986	1.1	1.2	1.1	1.5	1.2	1.0
1990	0.9	1.1	1.2	0.9	1.1	1.1

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-7 Standard errors for estimated percentages and scale scores for table 14-1

Parents' highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school	1978	0.4	1.5	0.6	1.2	0.6	1.2
	1982	0.7	1.7	0.6	1.4	0.9	1.0
	1986	0.4	2.5	1.0	2.3	0.4	2.3
	1990	0.4	2.3	0.5	1.8	0.6	2.2
Graduated from high school	1978	0.8	1.1	0.8	1.0	0.7	0.8
	1982	0.8	1.1	0.8	0.8	0.8	0.8
	1986	0.7	1.6	1.2	1.2	1.1	1.0
	1990	0.7	1.2	0.8	1.3	1.1	0.9
More than high school	1978	0.4	1.7	0.4	1.2	0.7	0.9
	1982	0.4	2.1	0.4	0.9	0.5	0.9
	1986	0.6	2.1	0.6	0.8	1.0	1.2
	1990	0.4	2.0	0.6	1.0	0.9	1.0
Graduated from college	1978	1.1	1.1	1.2	1.2	1.1	1.0
	1982	1.5	1.5	1.3	1.5	1.3	1.0
	1986	1.1	1.1	2.2	1.4	1.2	1.4
	1990	1.1	1.3	1.2	1.0	1.3	1.3

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-8 Standard errors for estimated percentages and scale scores for table 14-2

Classroom activity/year	Frequency of Activity					
	Often		Sometimes		Never	
	Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Listen to a teacher explain a mathematics lesson.						
1978	1.2	1.5	1.1	3.2	0.4	6.0
1990	1.3	1.8	1.0	2.3	0.6	4.4
Discuss mathematics in class.						
1978	1.5	1.8	1.4	1.8	0.6	4.0
1990	1.5	2.0	1.4	1.7	0.6	3.2
Watch the teacher work mathematics problems on the board.						
1978	1.1	1.5	0.9	2.9	0.4	5.2
1990	1.3	1.8	1.0	2.4	0.5	4.9
Work mathematics problems on the board.						
1978	1.3	1.9	1.2	1.8	1.1	3.9
1990	1.7	2.5	1.4	2.0	1.1	2.1
Make reports or do projects on mathematics.						
1978	0.2	8.3	1.2	2.5	1.3	1.5
1990	1.1	12.9	1.5	3.0	2.1	1.4
Take mathematics tests.						
1978	1.3	1.7	1.1	2.1	0.5	4.7
1990	1.0	1.7	0.8	2.9	0.4	7.8

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-9 Standard errors for estimated percentages and scale scores for table 14-3

Highest level of math taken/year	Nation	White	Black	Hispanic	Male	Female
Prealgebra or general mathematics						
1978 Percent	1.0	1.1	1.3	3.1	1.0	1.1
Proficiency	0.8	0.6	1.6	2.3	1.0	0.9
1990 Percent	0.9	0.9	2.0	2.9	1.2	0.9
Proficiency	1.1	1.1	2.2	4.0	1.7	1.8
Algebra I						
1978 Percent	0.6	0.6	1.2	2.1	0.6	0.7
Proficiency	0.7	0.6	1.5	2.8	0.9	1.0
1990 Percent	0.6	0.6	1.6	2.9	1.0	0.8
Proficiency	1.2	1.6	4.0	4.1	1.6	1.8
Geometry						
1978 Percent	0.6	0.7	0.8	1.2	0.5	0.8
Proficiency	0.7	0.6	1.9	4.4	1.0	0.8
1990 Percent	0.8	0.8	2.1	2.0	0.9	0.9
Proficiency	1.5	1.3	3.5	3.5	1.6	1.8
Algebra II						
1978 Percent	1.2	1.3	2.1	2.5	1.2	1.3
Proficiency	0.7	0.6	1.4	2.9	0.8	0.9
1990 Percent	1.2	1.4	3.2	3.5	1.4	1.8
Proficiency	1.0	0.9	3.2	3.3	1.2	1.1
Precalculus or calculus						
1978 Percent	0.4	0.4	0.6	0.9	2.0	0.4
Proficiency	1.4	1.1	6.5	6.1	0.5	1.8
1990 Percent	0.8	0.9	1.8	1.7	1.1	1.0
Proficiency	2.6	2.8	7.6	9.6	2.4	4.0

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-10 Standard errors for estimated percentages in table 14-4

Year	Level 150			Level 200			Level 250			Level 300			Level 350		
	Age			Age			Age			Age			Age		
	9	13	17	9	13	17	9	13	17	9	13	17	9	13	17
1978	0.3	0.1	0.0	0.9	0.5	0.1	0.7	1.2	0.5	0.1	0.7	1.1	0	0.2	0.4
1982	0.3	0.1	0.0	1.2	0.4	0.0	1.0	1.2	0.5	0.1	0.9	1.3	0	0.1	0.4
1986	0.3	0.0	0.0	1.2	0.2	0.1	0.9	1.6	0.5	0.2	1.0	1.4	0	0.1	0.5
1990	0.2	0.0	0.0	1.0	0.2	0.1	0.9	1.0	0.5	0.3	1.0	1.4	0	0.1	0.6

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 14-11 Standard errors for estimated scale scores for table 14-5

State	Average proficiency	Numbers and operations	Measurement	Geometry	Data analysis, statistics, and probability	Algebra and functions
Nation	**1.4**	**1.4**	**1.7**	**1.4**	**1.8**	**1.3**
Northeast	3.4	3.1	4.7	3.6	3.6	3.4
Southeast	2.7	2.9	3.8	2.6	3.3	2.7
Central	2.6	2.7	3.4	3.1	3.2	2.1
West	2.6	2.6	3.0	2.6	3.6	2.4
Alabama	1.2	1.2	1.4	1.2	1.6	1.4
Arizona	1.2	1.2	1.4	1.1	1.4	1.3
Arkansas	0.9	0.8	1.2	1.0	1.2	1.1
California	1.3	1.2	1.5	1.3	1.7	1.3
Colorado	1.0	1.0	1.3	1.1	1.1	1.1
Connecticut	1.1	1.0	1.5	1.1	1.4	1.2
Delaware	0.7	0.8	1.0	0.7	1.0	1.0
District of Columbia	0.7	0.8	1.0	0.9	1.1	1.1
Florida	1.2	1.2	1.4	1.3	1.5	1.3
Georgia	1.3	1.2	1.5	1.3	1.5	1.5
Hawaii	0.6	0.9	0.8	0.7	1.0	0.8
Idaho	0.7	0.8	1.0	0.8	0.9	0.9
Illionois	1.7	1.7	2.0	1.7	2.0	1.7
Indiana	1.1	1.2	1.3	1.1	1.4	1.2
Iowa	1.0	1.0	1.5	1.3	1.2	1.1
Kentucky	1.1	1.2	1.5	1.2	1.3	1.1
Louisana	1.2	1.1	1.5	1.3	1.6	1.3
Maryland	1.4	1.4	1.7	1.4	1.5	1.6
Michigan	1.1	1.2	1.3	1.0	1.4	1.2
Minnesota	0.9	1.0	1.1	1.1	0.9	0.9
Montana	0.8	1.0	1.4	0.8	0.8	0.9
Nebraska	0.9	1.0	1.4	1.1	1.0	1.0
New Hampshire	0.8	1.0	1.3	1.0	0.9	1.0
New Jersey	1.0	1.1	1.4	1.1	1.3	1.1
New Mexico	0.8	0.8	0.8	0.9	1.1	1.0
New York	1.3	1.3	1.6	1.4	1.7	1.2
North Carolina	1.0	1.0	1.1	1.0	1.3	1.0
North Dakota	1.2	1.1	1.9	1.3	1.5	1.1
Ohio	1.0	1.0	1.2	1.1	1.2	1.0
Oklahoma	1.2	1.2	1.5	1.4	1.6	1.2
Oregon	1.0	1.0	1.3	0.9	1.3	1.1
Pennsylvania	1.6	1.5	2.0	1.7	1.9	1.6
Rhode Island	0.5	0.6	0.8	0.6	0.6	0.8
Texas	1.3	1.2	1.4	1.4	1.7	1.5
Virgina	1.5	1.4	1.8	1.5	1.8	1.6
West Virginia	0.9	0.9	1.3	0.9	1.2	1.0
Wisconsin	1.3	1.2	1.7	1.3	1.4	1.3
Wyoming	0.6	0.7	0.9	0.6	0.7	0.7
Guam	0.6	0.7	0.9	0.8	0.8	0.7
Virgin Islands	0.5	0.6	1.3	0.8	1.2	0.8

SOURCE: National Assessment of Educational Progress, *The State of Mathematics Achievement: NAEP's 1990 Assessment of the Nation and the Trial Assessment of the States*, 1991.

Table 15-1 Average science proficiency, by parents' highest level of education: 1977–1990

Parents' highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school							
	1977	[1]9	[1]199	[1]13	[1]224	[1]15	265
	1982	7	198	[2]10	225	[1]13	259
	1986	4	204	[2]8	229	[2]8	258
	1990	[2]5	[2]210	[2]8	[2]233	[2]8	261
Graduated from high school							
	1977	[1]27	223	[1]33	245	[1]33	[1]284
	1982	[2]15	218	[2]26	243	[2]29	275
	1986	[2]16	[1]220	31	245	[2]28	277
	1990	[2]16	226	[2]27	247	[2]26	276
More than high school							
	1977	7	237	15	260	[1]17	296
	1982	8	229	17	259	[2]22	[1,2]290
	1986	7	236	15	258	[2]24	295
	1990	7	238	17	263	[2]24	297
Graduated from college							
	1977	[1]23	232	[1]27	266	[1]30	309
	1982	[2]42	231	[2]37	264	[1]32	[2]300
	1986	[2]38	235	[2]37	264	[2]37	304
	1990	[2]40	236	[2]41	268	[2]39	306

[1] Statistically significant difference from 1990.
[2] Statistically significant difference from 1977.

NOTE: Percent of students represents the percentage of all students from each subgroup. Not shown are about one-third of students who did not know their parent's highest level of education.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-2 Percentage of students at or above five science proficiency levels, by race/ethnicity: 1977 and 1990

Proficiency level	Age	1977				1990			
		Total	White	Black	Hispanic	Total	White	Black	Hispanic
Level 150	9	94	98	*72	*85	97	99	88	94
	13	99	100	93	94	100	100	99	99
	17	100	100	99	100	100	100	99	100
Level 200	9	*68	*77	*27	*42	76	84	46	56
	13	*86	92	*57	*62	92	97	78	80
	17	97	99	84	93	97	99	88	92
Level 250	9	*26	*31	4	9	31	38	9	12
	13	*49	*57	*15	*18	57	67	24	30
	17	82	88	*41	62	87	90	51	60
Level 300	9	3	4	0	0	3	4	0	0
	13	11	13	1	2	11	14	2	3
	17	42	48	8	19	43	51	16	21
Level 350	9	0	0	0	0	0	0	0	0
	13	1	1	0		0 0	1	0	0
	17	9	10	0	2	9	11	2	2

* Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-3 Percentage of students at or above five science proficiency levels, by sex: 1977 and 1990

Proficiency level	Age	1977		1990	
		Male	Female	Male	Female
Level 150	9	94	93	97	97
	13	99	98	100	100
	17	100	100	100	100
Level 200	9	*70	*67	76	76
	13	*87	*85	93	92
	17	98	96	97	97
Level 250	9	*27	*24	33	29
	13	*52	*45	60	53
	17	85	78	83	80
Level 300	9	4	3	4	2
	13	13	9	14	9
	17	49	35	48	39
Level 350	9	0	0	0	0
	13	1	0	1	0
	17	12	5	13	6

* Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-4 **Percentage of 17-year-olds who have taken science subjects for a year or more, by subject and by sex and race/ethnicity: 1982-1990**

Subject/year	Total	Sex		Race/ethnicity		
		Male	Female	White	Black	Hispanic
General science						
1982	61	63	59	61	66	58
1986	*69	*71	*67	*71	62	64
1990	56	60	53	56	58	69
Life science						
1982	27	29	26	27	27	31
1986	*40	*45	34	*40	40	41
1990	30	32	28	28	35	44
Physical science						
1982	*33	*33	33	32	34	35
1986	41	43	40	41	45	37
1990	41	42	40	39	47	55
Earth and space science						
1982	*27	30	*25	28	28	20
1986	38	41	34	38	44	23
1990	35	35	34	34	35	38
Biology						
1982	*76	*74	*78	*78	*66	62
1986	80	78	82	81	77	70
1990	85	82	87	86	79	78
Chemistry						
1982	*31	*31	*30	*33	*19	13
1986	*33	34	*31	*35	*23	16
1990	42	40	45	44	36	26
Physics						
1982	11	14	9	11	12	9
1986	11	13	8	11	9	7
1990	10	12	9	9	13	11

NOTE: The information reported in this table for 17-year-olds in 1990 was obtained from a different, but comparable, sample of 17-year-olds than the sample from which all other information for 17-year-olds in 1990 was obtained.

* Statistically significant difference from 1990.

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-5 Standard errors for estimated scale scores and percentages in text table for *Indicator 15*

Year	Age 9				Age 13				Age 17			
	All races	White	Black	Hispanic	All races	White	Black	Hispanic	All races	White	Black	Hispanic
1970	1.2	0.9	1.9	—	1.1	0.8	2.4	—	1.0	0.8	1.5	—
1973	1.2	0.9	1.9	—	1.1	0.8	2.4	—	1.0	0.8	1.5	—
1977	1.2	0.9	1.8	2.7	1.1	0.8	2.4	1.9	1.0	0.7	1.5	2.2
1982	1.8	1.9	3.0	4.2	1.3	1.1	1.3	3.9	1.2	1.0	1.7	2.3
1986	1.2	1.2	1.9	3.1	1.4	1.4	2.5	3.1	1.4	1.7	2.9	3.8
1990	0.8	0.8	2.0	2.2	0.9	0.9	3.1	2.6	1.1	1.1	4.5	4.4

Year	Age 9		Age 13		Age 17	
	Male	Female	Male	Female	Male	Female
1970	1.3	1.2	1.3	1.2	1.2	1.1
1973	1.3	1.2	1.3	1.2	1.2	1.1
1977	1.3	1.2	1.3	1.2	1.2	1.1
1982	2.3	2.0	1.5	1.3	1.4	1.3
1986	1.4	1.4	1.6	1.5	1.9	1.5
1990	1.1	1.0	1.1	1.1	1.3	1.6

—Not available.
SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-6 Standard errors for estimated percentages and scale scores for table 15-1

Parents' highest level of education	Year	Age 9		Age 13		Age 17	
		Percent of students	Average proficiency	Percent of students	Average proficiency	Percent of students	Average proficiency
Less than high school							
	1977	0.4	2.2	1977	1.3	0.9	1.3
	1982	0.9	6.0	1982	1.9	0.7	2.4
	1986	0.4	2.9	1986	2.7	0.4	3.1
	1990	0.4	2.7	1990	2.1	0.6	2.8
Graduated from high school							
	1977	0.5	1.4	1977	1.1	0.6	0.8
	1982	1.1	3.3	1982	1.3	0.9	1.6
	1986	0.7	1.5	1986	1.4	1.1	2.0
	1990	0.7	1.7	1990	1.3	1.1	1.4
More than high school							
	1977	0.3	1.5	1977	1.3	0.4	1.1
	1982	0.6	3.2	1982	1.5	0.6	1.7
	1986	0.6	2.6	1986	1.4	1.0	2.5
	1990	0.4	2.1	1990	1.2	0.9	1.6
Graduated college							
	1977	0.7	1.4	1977	1.0	1.2	1.0
	1982	2.3	2.3	1982	1.5	1.4	1.7
	1986	1.1	1.4	2.2	1.9	1.2	2.1
	1990	1.1	1.3	1.2	1.1	1.3	1.7

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-7 Standard error for estimated percentages for table 15-2

Proficiency level	Age	1977			1990		
		White	Black	Hispanic	White	Black	Hispanic
Level 150	9	0.3	1.8	1.8	0.2	1.3	1.5
	13	0.1	1.0	1.3	0.1	0.6	0.6
	17	0.0	0.3	0.2	0.7	0.7	0.9
Level 200	9	0.7	1.5	3.1	0.7	3.1	3.7
	13	0.5	2.4	2.4	0.4	3.6	2.9
	17	0.1	1.3	1.7	0.2	1.9	2.2
Level 250	9	0.7	0.6	1.7	1.1	1.1	2.1
	13	0.9	1.7	1.8	1.2	3.3	2.8
	17	0.4	1.5	1.7	0.8	3.7	5.0
Level 300	9	0.3	0.1	0.4	0.4	0.2	0.4
	13	0.5	0.4	0.8	0.8	0.5	0.8
	17	0.7	1.0	2.1	1.5	4.0	3.3
Level 350	9	0.0	0.0	0.1	0.1	0.0	0.0
	13	0.1	0.0	0.1	0.0	0.0	0.1
	17	0.4	0.2	0.6	0.7	0.8	1.6

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-8 Standard errors for estimated percentages for table 15-3

Proficiency level	Age	1977		1990	
		Male	Female	Male	Female
Level 150	9	0.5	0.7	0.5	0.4
	13	0.2	0.2	0.1	0.2
	17	0.0	0.1	0.2	0.2
Level 200	9	1.2	1.1	1.2	1.1
	13	0.8	0.8	0.8	0.8
	17	0.2	0.3	0.5	0.6
Level 250	9	0.9	0.9	1.1	1.0
	13	1.3	1.2	1.3	1.4
	17	0.7	1.0	1.2	1.4
Level 300	9	0.3	0.3	0.6	0.3
	13	0.6	0.5	0.9	0.6
	17	1.1	1.0	1.6	1.7
Level 350	9	0.0	0.0	0.1	0.1
	13	0.2	0.1	0.2	0.1
	17	0.6	0.4	0.8	0.5

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990*, 1991.

Table 15-9 Standard errors for estimated percentages for table 15-4

Subject/year	Total	Sex		Race/ethnicity		
		Male	Female	White	Black	Hispanic
General science						
1982	1.6	1.7	1.6	1.8	2.2	1.9
1986	1.6	2.1	1.9	1.7	2.8	3.2
1990	2.2	2.7	2.4	2.3	4.4	7.3
Life science						
1982	1.1	1.2	1.3	1.2	2.9	4.0
1986	2.0	2.5	2.1	2.1	3.7	4.7
1990	1.8	2.0	2.3	1.8	5.5	7.5
Physical science						
1982	2.1	2.1	2.3	2.3	4.2	11.2
1986	3.0	3.2	3.4	3.5	3.5	3.9
1990	3.0	3.0	3.4	2.9	6.3	10.0
Earth and space science						
1982	1.9	1.9	2.1	2.1	2.8	2.6
1986	1.8	2.3	2.2	2.2	3.5	3.0
1990	2.2	2.0	2.6	2.3	4.3	9.3
Biology						
1982	1.7	1.7	1.9	2.0	2.0	8.3
1986	1.8	2.3	1.8	2.3	2.8	3.7
1990	1.5	2.1	1.4	1.7	3.2	8.7
Chemistry						
1982	1.7	1.6	2.0	1.9	1.6	2.6
1986	1.7	2.2	2.1	2.0	2.5	2.8
1990	1.5	1.9	1.7	2.1	3.4	7.2
Physics						
1982	0.9	1.2	0.9	1.0	1.3	1.9
1986	0.9	1.4	1.3	1.1	1.2	2.3
1990	0.9	1.0	1.1	1.0	2.2	4.6

SOURCE: National Assessment of Educational Progress, *Trends in Academic Progress: Achievement of American Students in Science, 1969-70 to 1990, Mathematics, 1973 to 1990, Reading, 1971 to 1990, Writing, 1984 to 1990,* 1991.

Table 16-1 Distribution of percentage correct scores of 9-year-olds on mathematics assessment, by country: 1991

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada[1]	59.9	59.9	60.0	19.6	28.3	35.7	83.6	88.5	93.4
Hungary	68.2	68.2	68.2	20.4	33.3	40.7	90.2	93.4	98.4
Ireland	60.0	59.9	60.1	16.0	24.6	31.2	85.0	90.2	95.1
Israel[2]	64.4	66.0	62.7	21.3	30.4	38.6	86.9	91.8	96.7
Korea	74.8	77.2	72.4	26.2	41.0	50.8	93.4	95.1	98.4
Slovenia	55.8	55.8	55.9	18.9	27.7	34.0	79.3	84.5	93.1
Soviet Union[3]	65.9	66.4	65.4	20.0	30.8	37.7	90.2	93.4	98.4
Spain[4]	61.9	61.9	61.8	18.8	26.8	32.8	86.9	90.2	96.7
Taiwan	68.1	68.4	67.8	19.2	32.1	41.0	91.8	95.1	98.4
United States[5]	58.4	58.7	58.0	18.0	24.6	29.5	83.6	90.2	96.7
Populations with exclusions or low participation									
England[6]	59.5	58.5	60.3	17.2	26.7	32.8	86.9	91.8	96.7
Italy, Emilia-Romagna[6]	67.8	69.5	65.9	23.0	34.4	42.6	90.2	93.4	98.4
Portugal[7]	55.5	56.8	54.2	16.7	26.2	31.6	81.7	86.9	93.4
Scotland[6]	65.7	65.8	65.6	23.0	32.8	39.3	89.8	93.3	96.7
Canadian Populations									
British Columbia	61.9	61.8	62.0	18.2	29.5	36.1	85.3	90.2	96.7
New Brunswick-English	59.8	60.3	59.3	17.5	26.7	33.9	83.6	88.5	95.1
Ontario-English	56.8	56.3	57.2	18.0	24.6	31.2	81.1	85.7	93.4
Ontario-French	54.5	54.7	54.3	18.0	26.3	31.2	77.1	82.0	90.2
Quebec-English	62.5	62.9	62.0	18.0	29.5	36.1	86.9	90.2	96.7
Quebec-French	64.5	65.1	64.0	23.0	32.8	40.7	85.3	88.5	95.1
IAEP average	**63.3**								

[1] Four out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Fourteen out of 15 republics; Russian-speaking schools.

[4] All regions except Cataluña; Spanish-speaking schools.

[5] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[6] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[7] Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-2 Topic and process averages of 9-year-olds on mathematics assessment, by country: 1991

Country	Topics					Processes		
	Numbers and operations	Measurement	Geometry	Data analysis, statistic and probability	Algebra and functions	Conceptual understanding	Procedural knowledge	Problem solving
Comprehensive populations								
Canada[1]	55.0	65.4	64.7	72.3	56.4	60.4	61.1	57.4
Hungary	67.5	71.6	68.6	63.4	72.4	68.2	70.8	64.4
Ireland	58.0	64.2	57.9	65.2	59.4	59.3	63.9	55.5
Israel[2]	63.6	69.9	58.8	63.9	66.8	62.6	68.3	61.6
Korea	74.6	73.0	75.4	79.3	72.1	75.0	78.7	68.8
Slovenia	52.7	62.4	63.1	54.2	57.8	56.3	57.6	52.3
Soviet Union[3]	65.7	71.3	64.4	60.1	67.8	63.0	72.0	61.7
Spain[4]	61.3	60.8	60.1	69.3	58.3	60.8	66.1	57.3
Taiwan	67.1	69.3	69.2	72.8	64.2	68.5	76.1	55.7
United States[5]	54.3	63.2	56.9	72.8	55.3	59.7	59.5	54.5
Populations with exclusions or low participation								
England[6]	53.6	67.2	67.0	70.4	56.9	60.7	59.2	57.9
Italy, Emilia-Romagna[6]	67.3	73.3	64.6	71.1	60.8	67.8	72.5	60.6
Portugal[7]	54.4	58.3	55.6	57.1	54.6	55.7	59.5	49.2
Scotland[6]	62.1	71.3	68.5	73.9	63.1	66.3	67.9	61.8
Canadian Populations								
British Columbia	58.7	67.4	62.4	72.3	56.5	62.1	63.7	59.1
New Brunswick-English	56.1	66.0	63.1	69.3	54.6	61.2	61.1	55.7
Ontario-English	52.0	63.3	60.0	69.5	52.2	57.6	57.6	54.3
Ontario-French	48.2	60.0	61.7	67.6	55.1	55.9	54.4	52.4
Quebec-English	58.5	69.1	64.1	73.2	57.5	63.5	63.9	58.7
Quebec-French	59.1	68.1	72.8	76.8	63.6	64.6	66.2	62.0
IAEP average	**61.2**	**67.2**	**63.9**	**67.6**	**61.8**	**63.2**	**66.7**	**58.5**

[1] Four out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Fourteen out of 15 republics; Russian-speaking schools.

[4] All regions except Cataluña; Spanish-speaking schools.

[5] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[6] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[7] Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-3 Distribution of percentage correct scores of 13-year-olds on mathematics assessment, by country: 1991

populations	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada[1]	62.0	63.0	60.9	21.3	32.0	37.3	86.7	91.8	97.3
France	64.2	65.5	62.8	22.7	30.7	37.3	89.3	92.0	97.3
Hungary	68.4	68.5	68.3	21.3	32.4	38.7	93.3	96.0	98.7
Ireland	60.5	62.6	58.4	17.8	26.8	33.3	86.7	90.7	96.0
Israel[2]	63.1	64.4	61.8	21.3	30.7	37.3	87.8	90.7	96.0
Italy, Emilia-Romagna[3]	64.0	65.8	62.1	23.0	32.4	36.5	88.0	91.8	96.0
Jordan	40.4	41.4	39.1	13.3	17.6	21.3	65.3	75.7	89.3
Korea	73.4	74.4	72.2	20.0	33.3	41.3	96.0	97.3	100.0
Scotland[3]	60.6	60.4	60.8	21.3	29.0	34.7	86.7	90.7	96.0
Slovenia	57.1	58.1	56.1	21.3	27.1	32.0	82.7	88.0	94.7
Soviet Union[4]	70.2	70.0	70.3	20.9	35.2	42.7	92.0	94.7	98.7
Spain[5]	55.4	57.1	53.8	20.3	28.6	32.9	78.4	84.7	91.9
Switzerland[6]	70.8	72.8	68.7	30.7	42.7	50.7	93.3	94.7	98.7
Taiwan	72.7	73.1	72.4	18.7	26.7	35.0	97.3	98.7	100.0
United States[3]	55.3	55.8	54.8	17.3	24.0	29.3	82.7	90.7	97.3
Populations with exclusions or low participation									
Brazil, Fortaleza[7]	32.4	35.2	30.5	10.9	14.7	17.3	56.8	65.3	80.8
Brazil, Sao Paulo[8]	37.0	37.9	36.2	10.3	16.7	18.7	62.7	70.7	82.7
China[9]	80.2	81.7	78.5	37.0	49.3	57.3	96.0	98.7	100.0
England[10]	60.6	60.8	60.4	18.7	27.4	34.5	89.3	93.3	97.3
Mozambique[10,11]	28.3	28.8	27.8	11.5	16.2	18.7	44.6	50.0	60.0
Portugal[3,7]	48.3	48.9	47.9	17.3	23.9	28.0	74.7	80.6	89.7
Canadian populations									
Alberta	64.0	64.5	63.4	23.5	33.3	38.7	88.0	92.0	97.3
British Columbia	66.2	66.8	65.4	25.3	35.6	41.3	90.7	94.7	97.3
Manitoba-English	58.0	58.0	57.9	20.0	28.0	33.3	82.7	86.7	96.0
Manitoba-French	63.1	64.5	61.9	26.7	34.7	41.3	85.3	89.3	94.7
New Brunswick-English	57.7	58.3	57.1	20.0	27.5	33.3	82.7	89.3	96.0
New Brunswick-French	60.6	60.5	60.7	20.3	30.2	36.0	85.1	89.3	93.3
Newfoundland	58.9	57.8	59.9	18.7	29.3	34.7	84.0	88.0	96.0
Nova Scotia	59.7	60.7	58.8	20.0	29.3	35.1	85.3	90.7	97.3
Ontario-English	58.3	59.3	57.4	20.0	29.3	34.7	84.0	89.3	96.0
Ontario-French	53.5	53.5	53.5	18.7	25.3	32.0	76.0	82.7	92.0
Quebec-English[3]	65.7	65.7	65.7	23.0	33.8	41.3	90.7	94.7	98.7
Quebec-French	68.7	69.8	67.5	29.3	39.7	45.3	89.3	93.3	96.4
Saskatchewan-English	62.0	63.2	60.7	21.3	29.7	37.3	86.7	90.7	96.0
Saskatchewan-French	67.5	68.8	66.3	32.0	36.0	46.5	87.8	90.7	96.0
IAEP average	**58.3**								

[1] Nine out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[4] Fourteen out of 15 republics; Russian-speaking schools.

[5] All regions except Cataluña; Spanish-speaking schools.

[6] Fifteen out of 26 cantons.

[7] In-school population, restricted grades.

[8] Restricted grades.

[9] Twenty out of 29 provinces and independent cities; in-school population, restricted grades.

[10] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[11] Cities of Maputo and Beira; in-school population.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-4 Topic and process averages of 13-year-olds on mathematics assesment, by country: 1991

Country	Topics					Processes		
	Numbers and operations	Measurement	Geometry	Data analysis, statistic and probability	Algebra and functions	Conceptual understanding	Procedural knowledge	Problem solving
Comprehensive populations								
Canada[1]	65.6	49.9	68.1	76.4	52.7	65.1	61.9	58.9
France	65.0	52.7	73.1	79.3	57.0	67.4	65.7	59.3
Hungary	69.4	55.1	73.3	75.9	69.8	69.8	70.8	64.2
Ireland	65.1	49.4	59.9	71.8	55.6	61.5	62.0	57.9
Israel[2]	64.8	47.2	65.8	74.8	64.7	63.8	65.3	59.8
Italy, Emilia-Romagna[3]	63.8	62.8	75.3	71.7	52.6	66.6	62.1	63.3
Jordan	42.8	32.0	43.5	45.7	38.1	44.9	38.5	37.9
Korea	77.4	59.5	77.4	81.2	70.8	78.3	73.4	68.5
Scotland[3]	59.7	51.0	69.6	79.1	52.8	61.8	59.2	60.9
Slovenia	62.2	43.1	63.1	63.6	51.8	58.5	59.0	53.7
Soviet Union[4]	69.2	59.7	77.6	76.1	71.9	70.3	73.2	66.7
Spain[5]	60.1	37.9	60.0	67.7	52.5	58.4	55.8	51.9
Switzerland[6]	73.6	62.0	76.6	81.8	62.7	71.7	69.0	71.9
Taiwan	74.7	63.7	76.6	81.2	69.2	74.7	74.7	68.6
United States[3]	61.0	39.5	54.3	72.2	49.2	57.4	56.0	52.3
Populations with exclusions or low participation								
Brazil, Fortaleza[7]	35.8	20.5	28.6	43.8	32.3	35.3	30.8	31.0
Brazil, Sao Paulo[8]	40.9	24.1	34.3	49.7	35.6	38.5	36.5	36.0
China[9]	84.9	71.3	80.2	75.4	82.4	81.6	83.0	75.6
England[10]	58.5	51.2	70.3	79.5	54.0	62.0	59.0	60.8
Mozambique[10,11]	33.8	20.1	29.2	35.4	20.5	34.0	22.9	28.2
Portugal[3,7]	52.1	31.9	49.0	68.6	43.1	51.5	47.1	46.4
Canadian populations								
Alberta	68.6	54.3	67.2	80.0	52.1	68.3	62.6	61.0
British Columbia	69.3	54.1	69.6	79.9	60.2	68.5	68.0	61.8
Manitoba-English	62.5	45.6	58.4	73.6	50.8	60.5	58.8	54.4
Manitoba-French	67.1	48.5	66.6	75.0	58.5	64.6	66.0	58.2
New Brunswick-English	62.4	51.3	62.4	71.0	43.2	61.4	55.4	56.4
New Brunswick-French	65.4	46.5	64.5	72.3	54.3	63.7	62.6	55.3
Newfoundland	61.9	45.1	65.1	72.4	52.7	61.8	60.3	54.3
Nova Scotia	62.9	47.3	63.7	73.9	53.5	61.8	60.2	57.1
Ontario-English	61.8	46.2	63.4	73.6	49.5	60.8	58.5	55.5
Ontario-French	58.0	38.8	59.0	69.0	44.7	56.6	54.1	49.6
Quebec-English[3]	68.7	53.5	70.6	78.1	59.6	68.3	66.6	61.9
Quebec-French	72.3	56.4	78.1	81.1	58.4	72.6	68.0	65.3
Saskatchewan-English	66.1	49.6	62.9	78.3	54.6	64.0	64.4	57.2
Saskatchewan-French	73.9	53.8	69.2	76.0	61.6	70.1	69.3	62.9
IAEP average	**61.0**	**46.9**	**62.2**	**69.1**	**54.2**	**60.6**	**58.4**	**55.9**

[1] Nine out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[4] Fourteen out of 15 republics; Russian-speaking schools.

[5] All regions except Cataluña; Spanish-speaking schools.

[6] Fifteen out of 26 cantons.

[7] In-school population, restricted grades.

[8] Restricted grades.

[9] Twenty out of 29 provinces and independent cities; in-school population, restricted grades.

[10] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[11] Cities of Maputo and Beira; in-school population.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-5 Standard errors for estimated averages and percentiles in table 16-1

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada	0.5	0.7	0.6	1.6	2.5	1.5	0.0	0.0	2.8
Hungary	0.6	0.8	0.8	2.3	1.5	1.2	2.5	0.0	0.0
Ireland	0.8	0.9	1.1	3.3	0.4	1.5	3.9	0.0	0.0
Israel	0.7	0.8	0.9	0.4	2.8	3.1	2.1	0.0	0.0
Korea	0.6	0.7	0.8	0.9	3.7	4.6	0.0	0.0	0.0
Slovenia	0.6	0.7	0.7	0.8	1.8	0.8	0.3	0.0	0.0
Soviet Union	1.3	1.2	1.4	0.6	1.0	0.7	0.7	2.3	0.0
Spain	1.0	1.3	1.1	0.6	1.8	2.0	0.0	2.4	0.0
Taiwan	0.8	0.8	0.9	1.6	4.6	1.8	1.7	0.0	0.0
United States	1.0	1.1	1.2	1.1	0.0	2.1	0.0	2.3	1.6
Populations with exclusions or low participation									
England	1.9	1.5	2.9	2.1	1.6	0.5	2.5	3.3	0.0
Italy, Emilia-Romagna	0.9	1.0	1.1	2.0	1.6	0.3	1.7	4.9	0.0
Portugal	0.9	1.1	1.1	1.9	0.5	0.8	2.6	0.0	1.6
Scotland	0.9	1.1	1.1	0.1	0.0	2.8	4.6	2.7	4.6
Canadian populations									
British Columbia	0.7	0.9	0.9	3.5	0.0	3.6	0.0	5.5	0.0
New Brunswick-English	0.5	0.7	0.6	1.3	2.3	3.1	0.0	0.2	0.0
Ontario-English	0.7	0.9	0.9	0.0	2.4	1.5	4.6	3.1	0.0
Ontario-French	0.6	0.7	0.6	2.7	0.4	0.0	1.0	0.0	5.3
Quebec-English	0.8	0.9	1.0	0.0	0.4	1.7	0.9	0.0	0.0
Quebec-French	0.7	0.8	0.8	0.0	0.6	4.5	0.0	1.3	0.0

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-6 Standard errors for estimated averages in table 16-2

Country	Topics					Processes		
	Numbers and operations	Measurement	Geometry	Data analysis, statistic and probability	Algebra and functions	Conceptual understanding	Procedural knowledge	Problem solving
Comprehensive populations								
Canada	0.6	0.5	0.6	0.5	0.6	0.5	0.6	0.5
Hungary	0.7	0.7	0.7	0.8	0.8	0.6	0.7	0.7
Ireland	0.9	0.8	0.9	0.8	1.0	0.8	0.8	0.9
Israel	0.8	0.7	0.9	1.0	0.7	0.8	0.8	0.8
Korea	0.6	0.8	0.7	0.6	0.7	0.6	0.6	0.6
Slovenia	0.6	0.6	0.8	0.8	0.6	0.6	0.6	0.7
Soviet Union	1.3	1.0	1.3	1.5	1.3	1.3	1.2	1.4
Spain	1.1	0.8	1.1	1.1	1.1	1.0	1.0	1.1
Taiwan	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
United States	1.1	1.0	1.0	1.1	1.0	1.0	1.1	1.0
Populations with exclusions or low participation								
England	2.1	1.6	1.5	1.7	2.1	1.7	2.0	1.9
Italy, Emilia-Romagna	0.9	0.9	1.1	0.9	1.3	0.9	0.9	1.1
Portugal	1.1	0.7	1.2	1.0	1.0	0.9	1.1	1.0
Scotland	1.0	0.9	0.8	0.8	1.2	0.8	1.0	0.8
Canadian populations								
British Columbia	0.8	0.7	1.0	0.8	0.7	0.7	0.8	0.7
New Brunswick-English	0.6	0.5	0.5	0.6	0.5	0.4	0.6	0.6
Ontario-English	0.8	0.7	0.9	0.7	0.7	0.7	0.8	0.7
Ontario-French	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.7
Quebec-English	0.9	0.7	0.9	0.7	0.8	0.8	0.8	0.8
Quebec-French	0.8	0.7	0.7	0.7	0.8	0.6	0.9	0.8

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-7 Standard errors for estimated averages and percentiles in table 16-3

Populations	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada	0.6	0.7	0.6	0.6	0.0	0.0	0.0	4.3	1.3
France	0.8	0.9	0.9	3.0	0.8	1.0	0.0	5.3	1.3
Hungary	0.8	1.0	0.9	0.9	2.3	1.3	0.0	0.0	0.0
Ireland	0.9	1.2	1.1	1.3	1.7	2.0	0.0	0.0	4.2
Israel	0.8	0.9	1.1	1.0	1.0	0.2	2.6	0.0	3.9
Italy, Emilia-Romagna	0.9	1.1	0.9	1.3	0.9	1.5	0.0	0.5	0.0
Jordan	1.0	1.2	1.9	0.0	1.2	1.5	3.1	3.3	5.2
Korea	0.6	0.9	1.0	0.0	1.5	1.5	0.0	1.9	0.0
Scotland	0.9	1.0	1.1	0.8	2.8	0.0	0.0	0.0	0.0
Slovenia	0.8	0.8	1.0	0.0	3.9	0.1	0.2	2.6	0.0
Soviet Union	1.0	1.3	0.9	2.4	1.4	0.8	0.0	0.0	0.0
Spain	0.8	1.1	0.8	1.6	0.5	2.0	0.8	1.3	2.0
Switzerland	1.3	1.5	1.1	1.2	0.8	1.9	1.3	0.0	0.0
Taiwan	0.7	0.9	0.9	1.4	0.0	3.0	1.3	0.0	0.0
United States	1.0	1.1	1.3	3.8	0.6	0.0	1.3	0.1	0.0
Populations with exclusions or low participation									
Brazil, Fortaleza	0.6	0.9	0.6	0.4	0.6	0.3	2.1	0.6	3.5
Brazil, Sao Paulo	0.8	0.9	0.9	2.1	1.0	0.9	0.7	1.5	0.7
China	1.0	1.0	1.1	2.2	2.7	3.3	1.3	1.3	0.0
England	2.2	3.0	2.2	1.9	3.3	3.7	0.5	1.3	1.0
Mozambique	0.3	0.5	0.3	1.1	0.6	0.1	1.4	3.2	2.2
Portugal	0.8	1.3	0.9	0.9	1.3	0.5	0.9	1.7	2.6
Canadian populations									
Alberta	0.7	0.8	0.8	2.6	0.0	3.5	0.3	1.8	0.0
British Columbia	0.7	0.8	1.0	0.7	2.1	0.0	4.0	3.6	1.3
Manitoba-English	0.8	0.9	1.0	1.7	2.7	4.2	0.0	0.0	3.5
Manitoba-French	0.6	1.1	0.8	2.7	2.4	0.0	0.0	0.0	0.0
New Brunswick-English	0.5	0.7	0.7	0.0	1.6	0.0	0.0	2.0	0.0
New Brunswick-French	0.4	0.6	0.6	1.3	3.1	0.0	1.3	0.0	0.0
Newfoundland	0.6	0.7	0.8	1.3	0.4	0.0	2.1	5.8	2.7
Nova Scotia	0.6	0.9	0.8	0.0	1.2	1.5	0.0	0.0	0.0
Ontario-English	0.8	1.0	0.9	1.2	0.0	0.0	2.0	1.3	1.3
Ontario-French	0.6	0.8	0.8	0.2	1.1	0.0	3.0	0.0	2.3
Quebec-English	0.9	1.6	0.8	2.5	3.9	1.3	0.0	2.4	0.0
Quebec-French	0.7	1.0	0.8	1.4	1.8	2.8	0.0	0.0	2.7
Saskatchewan-English	0.7	0.9	1.0	1.3	4.5	5.8	3.8	0.0	0.0
Saskatchewan-French	1.0	1.5	1.4	1.3	2.9	3.7	3.9	2.5	1.3

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 16-8 Standard errors for estimated averages in table 16-4

Country	Topics					Processes		
	Numbers and operations	Measurement	Geometry	Data analysis, statistic and probability	Algebra and functions	Conceptual understanding	Procedural knowledge	Problem solving
Comprehensive populations								
Canada	0.6	0.6	0.7	0.6	0.7	0.6	0.7	0.5
France	0.7	1.0	0.8	0.7	1.0	0.7	0.9	0.8
Hungary	0.7	1.0	0.8	0.8	0.9	0.7	0.8	0.8
Ireland	0.8	1.0	1.1	1.0	1.1	0.8	1.2	0.8
Israel	0.7	1.1	1.0	0.8	1.0	0.8	0.9	0.9
Italy, Emilia-Romagna	0.8	1.1	1.0	0.8	1.2	0.8	1.1	0.9
Jordan	1.0	1.0	1.1	1.0	1.3	0.9	1.2	1.0
Korea	0.6	0.9	0.6	0.7	0.8	0.5	0.7	0.7
Scotland	0.8	1.2	0.9	0.8	1.2	0.9	1.0	0.9
Slovenia	0.7	0.9	1.0	0.8	1.0	0.7	0.9	0.8
Soviet Union	1.0	1.1	1.0	1.3	1.1	1.0	1.2	1.0
Spain	0.6	0.8	1.2	0.8	1.2	0.7	0.9	0.8
Switzerland	1.0	1.5	1.3	1.1	1.9	1.1	1.4	1.3
Taiwan	0.6	0.9	0.8	0.6	0.9	0.7	0.7	0.8
United States	1.0	1.0	1.0	1.0	1.6	0.9	1.3	1.0
Populations with exclusions or low participation								
Brazil, Fortaleza	0.7	0.5	0.8	0.8	0.9	0.7	0.8	0.5
Brazil, Sao Paulo	0.8	0.5	1.5	1.0	1.1	0.9	1.1	0.6
China	0.9	1.5	1.1	1.2	0.9	1.0	0.9	1.2
England	2.0	2.5	2.4	1.8	2.8	2.1	2.6	2.0
Mozambique	0.4	0.3	0.5	0.6	0.5	0.4	0.4	0.4
Portugal	0.8	0.7	1.3	1.0	1.1	0.9	1.0	0.7
Canadian populations								
Alberta	0.7	0.9	0.8	0.7	0.9	0.7	0.8	0.7
British Columbia	0.7	0.9	0.9	0.7	0.8	0.7	0.8	0.7
Manitoba-English	0.7	0.9	0.9	0.9	1.0	0.8	0.9	0.7
Manitoba-French	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.6
New Brunswick-English	0.5	0.6	0.6	0.6	0.6	0.5	0.6	0.5
New Brunswick-French	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4
Newfoundland	0.6	0.7	0.9	0.7	0.6	0.7	0.7	0.6
Nova Scotia	0.6	0.8	0.7	0.7	0.8	0.6	0.6	0.6
Ontario-English	0.8	0.9	1.0	0.8	1.0	0.8	0.9	0.8
Ontario-French	0.6	0.7	1.0	0.7	0.9	0.7	0.8	0.6
Quebec-English	0.9	1.1	1.0	1.0	1.1	0.9	1.0	1.0
Quebec-French	0.6	1.0	0.8	0.6	1.0	0.7	0.8	0.8
Saskatchewan-English	0.6	0.9	1.2	0.7	0.8	0.7	0.8	0.7
Saskatchewan-French	1.0	1.3	1.3	1.2	1.4	1.2	1.0	1.1

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Mathematics*, 1992.

Table 17-1 Distribution of percentage correct scores of 9-year-olds on science assessment, by country: 1991

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive									
Canada[1]	62.8	63.6	62.0	27.6	37.9	43.1	81.0	84.5	91.4
Hungary	62.5	63.4	61.6	26.9	38.5	44.8	79.3	84.2	89.7
Ireland	56.5	58.2	54.8	22.9	29.3	36.2	75.9	81.0	89.7
Israel[2]	61.2	63.0	59.4	27.6	36.2	41.4	81.0	86.2	93.1
Korea	67.9	70.4	65.1	32.8	44.8	50.0	84.5	87.9	93.1
Slovenia	57.7	58.3	57.0	27.8	35.1	40.4	75.4	79.0	86.0
Soviet Union[3]	61.5	62.7	60.4	29.3	39.7	43.1	79.3	86.2	93.1
Spain[4]	61.7	63.4	59.7	27.6	36.2	41.8	81.0	84.5	89.7
Taiwan	66.7	68.5	64.6	27.6	39.7	44.8	86.2	89.7	94.8
United States[5]	64.7	65.5	63.8	25.9	36.2	43.1	84.5	87.9	93.1
Populations with exclusions or low participation									
England[6]	62.9	63.8	62.0	24.1	36.2	41.4	82.8	86.2	93.1
Italy, Emilia-Romagna[6]	66.9	67.9	65.8	31.0	41.4	48.3	86.2	89.7	94.8
Portugal[7]	54.8	56.3	53.3	26.3	33.3	37.9	72.4	79.0	86.2
Scotland[6]	62.2	61.9	62.5	27.6	36.8	43.1	81.0	84.5	89.7
Canadian populations									
British Columbia	65.9	66.1	65.6	29.3	41.4	46.6	82.8	86.2	91.4
New Brunswick-English	61.6	61.9	61.3	24.1	34.5	41.4	81.0	84.5	91.4
Ontario-English	62.5	63.6	61.4	27.6	36.2	43.1	81.0	86.2	91.4
Ontario-French	56.3	56.5	56.1	28.9	34.5	39.7	74.1	79.3	86.2
Quebec-English	63.0	64.3	61.7	29.3	37.9	43.1	82.8	86.2	91.4
Quebec-French	62.8	63.2	62.4	32.8	40.7	44.8	79.3	84.5	89.7
IAEP average	62.1								

[1] Four out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Fourteen out of 15 republics; Russian-speaking schools.

[4] All regions except Cataluña; Spanish-speaking schools.

[5] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonrespons bias.

[6] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[7] Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, Learning Science, 1992.

Table 17-2 Topic and process averages of 9-year-olds on science assessment, by country: 1991

Country	Topics				Processes		
	Life science	Physical science	Earth & space science	Nature of science	Knows science	Uses sciences	Integrates sciences
Comprehensive populations							
Canada[1]	63.3	57.7	66.8	67.3	63.4	65.3	56.4
Hungary	64.7	56.3	68.2	62.0	66.1	61.1	57.4
Ireland	54.7	53.8	62.9	59.5	57.2	57.4	53.0
Israel[2]	61.4	59.8	60.6	64.1	61.0	63.0	57.7
Korea	69.1	68.2	62.4	70.7	67.3	70.1	64.5
Slovenia	59.4	56.6	58.3	54.1	60.3	57.0	52.9
Soviet Union[3]	63.8	58.1	63.1	60.2	63.9	62.3	54.7
Spain[4]	65.7	54.1	62.7	65.1	66.7	60.3	53.8
Taiwan	65.3	68.1	66.6	67.4	65.3	69.5	63.6
United States[5]	65.2	57.5	70.6	70.7	67.0	65.5	57.9
Populations with exclusions or low participation							
England[6]	62.4	60.1	66.3	66.0	64.5	63.6	58.2
Italy, Emilia-Romagna[6]	71.3	61.0	66.8	66.9	71.6	66.1	58.2
Portugal[7]	58.1	50.0	57.3	52.4	58.4	54.1	48.5
Scotland[6]	61.3	59.1	65.1	67.7	62.5	62.7	60.4
Canadian populations							
British Columbia	66.4	59.6	72.1	69.9	68.2	66.9	58.6
New Brunswick-English	61.3	56.9	67.2	65.4	63.1	63.4	54.5
Ontario-English	63.0	56.6	68.4	66.2	64.3	64.1	55.1
Ontario-French	54.9	53.7	60.5	60.3	55.1	59.7	51.7
Quebec-English	63.9	57.3	66.8	67.9	65.1	64.4	55.7
Quebec-French	63.3	59.1	63.0	69.0	61.1	66.9	57.9
IAEP average	**63.3**	**58.6**	**64.1**	**63.9**	**63.9**	**62.7**	**56.9**

[1] Four out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Fourteen out of 15 republics; Russian-speaking schools.

[4] All regions except Cataluña; Spanish-speaking schools.

[5] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[6] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

[7] Restricted grades.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-3 Distribution of percentage correct scores of 13-year-olds on science assessment, by country: 1991

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada[1]	68.8	70.5	67.1	32.8	43.8	48.4	87.5	90.6	95.3
France	68.6	70.7	66.5	31.3	40.6	45.3	89.1	92.2	96.9
Hungary	73.4	75.6	71.4	33.3	45.3	51.6	92.2	95.3	98.4
Ireland	63.3	66.1	60.8	27.4	35.9	40.6	84.4	89.1	95.3
Israel[2]	69.7	71.6	68.0	34.4	42.2	47.6	89.1	92.2	96.9
Italy, Emilia-Romagna[3]	69.9	72.2	67.6	31.3	43.8	48.4	89.1	92.2	95.3
Jordan	56.6	57.1	55.9	23.4	30.2	35.9	78.1	84.4	92.2
Korea	77.5	79.6	75.0	35.9	50.0	57.8	93.8	95.3	98.4
Scotland[3]	67.9	69.6	66.3	28.6	39.1	45.3	87.5	90.6	96.9
Slovenia	70.3	72.5	68.2	34.4	43.8	50.0	89.1	92.2	96.9
Soviet Union[4]	71.3	72.9	69.6	31.3	43.8	50.8	89.1	92.2	96.9
Spain[5]	67.5	69.2	66.0	35.1	42.6	48.4	85.9	89.1	95.3
Switzerland[6]	73.7	76.4	70.9	35.9	50.0	57.8	92.2	95.3	98.4
Taiwan	75.6	76.3	74.9	28.6	42.2	51.6	93.8	95.3	98.4
United States[3]	67.0	69.4	64.5	28.1	39.3	43.8	85.9	90.6	95.3
Populations with exclusions or low participation									
Brazil, Fortaleza[7]	46.4	49.1	44.3	21.8	27.3	31.3	67.2	73.4	85.9
Brazil, Sao Paulo[8]	52.7	56.3	49.6	23.4	29.7	33.3	74.5	81.3	92.2
China[9]	67.2	69.4	64.8	28.1	40.6	45.3	87.5	92.2	96.9
England[10]	68.7	70.3	67.1	31.3	39.1	44.3	89.1	92.2	98.4
Portugal[3,7]	62.6	65.0	60.3	28.1	37.3	42.2	84.4	89.1	93.8
Canadian populations									
Alberta	74.1	76.4	71.8	35.9	48.4	54.7	90.6	93.8	96.9
British Columbia	72.4	73.5	71.4	35.9	46.9	53.1	89.1	92.2	95.3
Manitoba-English	68.6	70.3	66.9	29.7	39.1	45.3	87.5	92.2	95.3
Manitoba-French	66.6	69.5	64.2	32.8	42.2	46.9	85.9	89.1	93.8
New Brunswick-English	66.3	67.9	64.8	29.6	39.1	45.3	85.9	89.1	95.3
New Brunswick-French	63.6	64.2	63.1	29.7	37.5	43.8	82.8	87.5	93.8
Newfoundland	66.1	68.7	63.7	31.3	39.1	45.3	87.5	90.6	95.3
Nova Scotia	68.7	70.2	67.0	31.3	42.2	48.4	87.5	90.6	95.3
Ontario-English	67.0	68.6	65.5	31.3	42.2	46.9	85.9	90.6	95.3
Ontario-French	60.3	62.2	58.5	29.0	37.5	40.6	81.3	84.4	92.2
Quebec-English[3]	69.2	71.2	67.1	32.8	43.8	48.4	87.5	92.2	96.9
Quebec-French	71.4	73.1	69.5	34.4	46.9	53.1	89.1	92.2	96.9
Saskatchewan-English	70.1	72.0	68.2	32.8	43.8	50.0	89.1	92.2	96.9
Saskatchewan-French	64.8	66.2	63.4	32.8	45.3	50.0	82.8	87.5	92.2
IAEP average	**66.9**								

[1] Nine out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[4] Fourteen out of 15 republics; Russian-speaking schools.

[5] All regions except Cataluña; Spanish-speaking schools.

[6] Fifteen out of 26 cantons.

[7] In-school population, restricted grades.

[8] Restricted grades.

[9] Twenty out of 29 provinces and independent cities; in-school population, restricted grades.

[10] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-4 Topic and process averages of 13-year-olds on science assessment, by country: 1991

Country	Topics				Processes		
	Life science	Physical science	Earth & space science	Nature of science	Knows science	Uses sciences	Integrates sciences
Comprehensive populations							
Canada[1]	68.5	64.9	67.9	79.0	71.7	66.1	71.0
France	67.5	66.8	66.8	75.7	71.4	66.3	70.1
Hungary	77.3	70.1	72.2	75.3	82.5	71.1	69.9
Ireland	61.0	60.7	65.5	71.4	66.0	62.0	63.4
Israel[2]	65.4	69.8	67.5	78.5	70.5	68.4	71.1
Italy, Emilia-Romagna[3]	71.8	67.0	70.8	72.7	76.7	66.9	69.6
Jordan	58.6	53.8	60.7	56.1	65.3	56.6	49.2
Korea	80.3	75.8	74.8	78.8	83.9	77.2	72.7
Scotland[3]	67.3	65.7	64.1	76.8	72.3	65.8	67.7
Slovenia	73.1	67.3	70.1	72.5	80.2	68.0	66.0
Soviet Union[4]	73.0	70.8	73.0	68.0	78.8	69.8	67.6
Spain[5]	70.3	64.1	68.5	70.0	76.3	65.2	64.3
Switzerland[6]	74.3	70.3	74.5	79.8	77.1	71.6	74.6
Taiwan	77.9	74.8	72.2	76.4	81.4	74.7	72.3
United States[3]	69.1	61.6	67.0	75.6	72.8	65.1	65.4
Populations with exclusions or low participation							
Brazil, Fortaleza[7]	51.3	42.6	48.6	44.8	55.5	45.4	40.5
Brazil, Sao Paulo[8]	56.3	48.8	55.8	52.5	60.4	51.9	47.5
China[9]	63.8	67.6	70.2	69.7	68.2	67.1	66.6
England[10]	68.2	66.6	65.9	76.5	72.1	66.8	69.0
Portugal[3,7]	65.9	58.4	61.1	67.7	69.8	60.9	59.5
Canadian populations							
Alberta	72.3	71.3	73.7	84.0	75.7	72.0	76.4
British Columbia	70.2	70.7	72.1	80.7	76.4	69.6	74.0
Manitoba-English	67.5	64.9	70.5	77.3	72.6	66.8	68.3
Manitoba-French	65.2	64.4	67.4	73.3	69.7	64.1	68.2
New Brunswick-English	66.2	62.8	65.8	74.9	69.7	64.6	66.5
New Brunswick-French	62.0	62.2	64.5	69.0	63.5	63.4	64.1
Newfoundland	64.8	62.4	68.5	75.1	69.9	64.6	65.7
Nova Scotia	68.0	65.8	68.9	76.4	71.8	67.7	67.8
Ontario-English	66.4	63.0	65.8	78.1	69.8	64.2	69.4
Ontario-French	60.7	56.2	61.2	68.1	62.1	58.8	61.2
Quebec-English[3]	69.0	64.8	68.1	80.6	72.9	66.4	71.1
Quebec-French	72.5	67.1	70.4	80.2	74.3	68.8	73.5
Saskatchewan-English	70.5	65.1	71.5	79.8	74.0	68.2	70.2
Saskatchewan-French	63.9	59.8	68.7	74.4	67.8	62.1	67.0
IAEP average	**68.0**	**64.4**	**66.9**	**70.9**	**72.6**	**65.4**	**64.9**

[1] Nine out of 10 provinces.

[2] Hebrew-speaking schools.

[3] Combined school and student participation rate is below .80 but at least .70; interpret results with caution because of possible nonresponse bias.

[4] Fourteen out of 15 republics; Russian-speaking schools.

[5] All regions except Cataluña; Spanish-speaking schools.

[6] Fifteen out of 26 cantons.

[7] In-school population, restricted grades.

[8] Restricted grades.

[9] Twenty out of 29 provinces and independent cities; in-school population, restricted grades.

[10] Combined school and student participation rate is below .70; interpret results with extreme caution because of possible nonresponse bias.

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-5 Standard errors for estimated averages and percentiles in table 17-1

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada	0.4	0.4	0.5	0.5	1.1	0.0	0.0	0.0	0.0
Hungary	0.5	0.6	0.6	1.7	0.7	0.0	0.0	2.9	0.0
Ireland	0.7	1.0	0.9	1.4	1.6	1.3	0.0	1.8	5.2
Israel	0.7	0.9	0.7	0.3	1.4	0.0	0.0	0.0	0.0
Korea	0.5	0.7	0.5	4.9	0.4	0.0	0.0	0.0	3.4
Slovenia	0.5	0.6	0.6	0.8	0.2	0.4	0.0	0.0	1.5
Soviet Union	1.2	1.4	1.2	4.2	1.5	1.4	4.8	2.4	2.4
Spain	0.7	0.9	0.7	3.1	0.0	1.6	0.0	0.0	0.0
Taiwan	0.5	0.6	0.7	1.3	0.0	7.2	0.0	0.0	0.0
United States	0.9	1.1	0.8	0.3	1.7	5.1	0.0	0.0	0.0
Populations with exclusions or low participation									
England	0.9	1.3	1.2	4.1	0.9	0.0	0.0	2.8	0.0
Italy, Emilia-Romagna	0.9	1.0	1.0	1.7	3.3	0.3	1.7	1.7	0.0
Portugal	0.7	0.9	0.9	3.8	3.2	0.0	0.0	5.6	3.9
Scotland	0.7	0.7	1.0	0.0	3.0	0.0	3.5	0.0	0.0
Canadian populations									
British Columbia	0.6	0.8	0.6	4.6	0.0	3.6	0.0	0.0	0.0
New Brunswick-English	0.4	0.5	0.6	0.0	3.2	0.0	0.0	0.0	0.0
Ontario-English	0.5	0.6	0.7	0.0	2.6	3.1	0.0	3.4	0.0
Ontario-French	0.5	0.7	0.5	3.5	0.0	0.0	0.0	1.8	0.0
Quebec-English	0.7	0.9	0.8	2.0	0.0	2.0	0.0	0.0	0.0
Quebec-French	0.5	0.7	0.5	5.2	3.6	0.6	0.0	0.0	4.9

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-6 Standard errors for estimated averages in table 17-2

Country	Topics				Processes		
	Life science	Physical science	Earth & space science	Nature of sciences	Knows science	Uses science	Integrates science
Comprehensive populations							
Canada	0.4	0.4	0.4	0.5	0.4	0.4	0.4
Hungary	0.6	0.6	0.5	0.6	0.5	0.5	0.7
Ireland	0.8	0.7	0.8	0.8	0.8	0.7	0.8
Israel	0.8	0.6	0.7	0.9	0.8	0.6	0.8
Korea	0.5	0.5	0.6	0.6	0.5	0.5	0.5
Slovenia	0.5	0.5	0.7	0.6	0.5	0.5	0.7
Soviet Union	1.4	0.9	1.4	1.4	1.4	1.1	1.4
Spain	0.7	0.7	0.7	1.0	0.7	0.7	0.8
Taiwan	0.6	0.5	0.7	0.6	0.6	0.6	0.6
United States	0.9	0.8	1.1	1.0	1.0	0.9	0.8
Populations with exclusions or low participation							
England	0.9	0.9	1.1	1.1	1.0	0.9	1.0
Italy, Emilia-Romagna	0.9	0.9	0.9	1.1	0.9	0.9	1.1
Portugal	0.8	0.6	0.9	1.1	0.9	0.7	0.8
Scotland	0.7	0.8	0.7	1.0	0.6	0.7	0.8
Canadian populations							
British Columbia	0.7	0.7	0.6	0.8	0.6	0.6	0.8
New Brunswick-English	0.4	0.4	0.5	0.5	0.4	0.4	0.5
Ontario-English	0.6	0.5	0.6	0.7	0.6	0.5	0.5
Ontario-French	0.5	0.5	0.5	0.7	0.5	0.5	0.6
Quebec-English	0.8	0.6	0.8	0.8	0.8	0.6	0.8
Quebec-French	0.6	0.6	0.6	0.7	0.5	0.6	0.6

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-7 Standard errors for estimated averages and percentiles in table 17-3

Country	Average percent correct			Percentile scores					
	Total	Male	Female	1st	5th	10th	90th	95th	99th
Comprehensive populations									
Canada	0.4	0.5	0.4	0.0	0.0	1.7	0.0	0.0	0.0
France	0.6	0.7	0.7	1.8	2.1	1.7	0.0	0.0	0.0
Hungary	0.5	0.6	0.7	1.9	1.0	0.0	0.0	0.0	0.0
Ireland	0.6	0.9	0.8	2.3	0.0	2.3	3.2	0.0	0.0
Israel	0.7	0.8	0.8	0.1	0.0	3.9	0.0	0.0	0.0
Italy, Emilia-Romagna	0.7	0.8	0.8	2.7	4.4	0.0	0.8	0.0	0.0
Jordan	0.7	0.8	1.3	0.0	2.9	0.0	1.6	2.1	3.5
Korea	0.5	0.6	0.7	0.0	0.0	3.8	0.0	0.0	0.0
Scotland	0.6	0.7	0.9	2.5	0.0	0.0	2.6	5.4	5.2
Slovenia	0.5	0.7	0.6	2.2	0.0	0.0	0.0	0.0	3.8
Soviet Union	1.0	1.1	1.0	0.6	1.0	1.9	2.3	2.7	0.0
Spain	0.6	0.8	0.7	0.5	1.3	0.2	2.6	0.0	0.0
Switzerland	0.9	1.1	0.8	2.9	5.7	0.6	0.0	0.0	0.0
Taiwan	0.4	0.6	0.6	3.6	0.0	0.0	0.0	0.0	0.0
United States	1.0	1.2	0.9	2.0	2.9	5.1	0.0	0.0	0.0
Populations with exclusions or low participation									
Brazil, Fortaleza	0.6	0.7	0.8	2.1	1.1	0.0	0.6	0.1	2.5
Brazil, Sao Paulo	0.6	0.8	0.7	1.2	0.7	0.8	3.9	1.7	2.7
China	1.1	1.2	1.1	3.5	0.6	1.6	1.6	2.2	1.6
England	1.2	1.6	1.8	0.0	0.0	3.3	0.0	0.0	3.5
Portugal	0.8	1.0	0.8	2.7	1.6	3.1	0.0	0.0	1.6
Canadian populations									
Alberta	0.4	0.6	0.5	0.5	0.0	0.0	0.0	0.0	0.0
British Columbia	0.5	0.6	0.6	1.6	0.0	0.0	0.0	0.0	0.0
Manitoba-English	0.6	0.7	0.7	4.1	1.6	2.3	2.2	0.0	1.6
Manitoba-French	0.7	1.1	0.8	2.2	2.7	0.0	0.0	0.0	3.1
New Brunswick-English	0.4	0.5	0.5	0.3	0.0	0.0	0.0	0.0	3.5
New Brunswick-French	0.3	0.6	0.5	0.0	0.0	0.0	3.5	0.0	0.0
Newfoundland	0.5	0.7	0.6	0.0	0.0	0.0	2.2	0.0	0.0
Nova Scotia	0.4	0.7	0.6	4.7	7.0	1.6	0.0	0.0	0.0
Ontario-English	0.6	0.8	0.5	1.1	4.8	0.0	2.2	2.7	0.0
Ontario-French	0.5	0.7	0.7	2.6	0.0	1.8	0.6	0.0	0.0
Quebec-English	0.5	0.7	0.7	0.0	0.0	2.2	0.0	0.0	3.8
Quebec-French	0.5	0.6	0.6	3.1	1.6	1.3	0.0	0.0	0.0
Saskatchewan-English	0.6	0.7	0.6	1.6	0.0	0.0	0.0	0.0	0.0
Saskatchewan-French	0.8	1.1	1.3	3.5	3.8	3.8	3.0	2.7	1.6

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 17-8 Standard errors for estimated averages in table 17-4

Country	Topics				Processes		
	Life science	Physical science	Earth & space science	Nature of science	Knows science	Uses sciences	Integrates sciences
Comprehensive populations							
Canada	0.4	0.4	0.4	0.5	0.4	0.4	0.5
France	0.6	0.6	0.6	0.7	0.6	0.6	0.8
Hungary	0.5	0.6	0.6	0.7	0.5	0.5	0.7
Ireland	0.6	0.7	0.8	0.7	0.7	0.6	0.7
Israel	0.7	0.7	0.8	0.7	0.7	0.6	0.8
Italy, Emilia-Romagna	0.7	0.7	0.7	0.7	0.7	0.7	0.8
Jordan	0.7	0.8	0.9	0.9	0.7	0.8	0.9
Korea	0.5	0.5	0.6	0.6	0.5	0.4	0.6
Scotland	0.7	0.7	0.8	0.7	0.7	0.6	0.8
Slovenia	0.6	0.5	0.6	0.6	0.5	0.5	0.6
Soviet Union	1.0	1.0	0.9	1.2	1.1	0.8	1.3
Spain	0.6	0.7	0.7	0.7	0.7	0.6	0.8
Switzerland	0.9	0.9	0.8	1.0	0.9	0.8	1.1
Taiwan	0.5	0.4	0.5	0.6	0.5	0.4	0.5
United States	1.0	1.1	0.9	1.3	1.0	0.9	1.3
Populations with exclusions or low participation							
Brazil, Fortaleza	0.7	0.6	0.7	0.9	0.8	0.5	0.8
Brazil, Sao Paulo	0.8	0.5	0.7	0.8	0.9	0.5	0.7
China	1.1	1.1	1.4	1.1	1.1	1.1 G	1.1
England	1.2	1.2	1.5	1.4	1.2	1.2	1.5
Portugal	0.8	0.7	0.9	1.2	0.8	0.7	1.1
Canadian populations							
Alberta	0.5	0.5	0.5	0.5	0.5	0.4	0.6
British Columbia	0.5	0.5	0.6	0.6	0.5	0.5	0.6
Manitoba-English	0.6	0.6	0.6	0.7	0.6	0.5	0.7
Manitoba-French	0.8	0.8	0.7	0.9	0.8	0.7	1.0
New Brunswick-English	0.4	0.4	0.5	0.4	0.4	0.4	0.5
New Brunswick-French	0.4	0.4	0.4	0.5	0.5	0.3	0.5
Newfoundland	0.6	0.5	0.7	0.6	0.6	0.5	0.6
Nova Scotia	0.5	0.4	0.5	0.9	0.4	0.4	0.8
Ontario-English	0.6	0.7	0.6	0.7	0.6	0.6	0.8
Ontario-French	0.6	0.6	0.6	0.8	0.7	0.5	0.7
Quebec-English	0.5	0.6	0.6	0.6	0.6	0.5	0.7
Quebec-French	0.5	0.6	0.6	0.6	0.6	0.5	0.7
Saskatchewan-English	0.6	0.7	0.7	0.6	0.6	0.5	0.8
Saskatchewan-French	1.1	1.1	0.9	1.1	1.1	0.8	1.2

SOURCE: Educational Testing Service, International Assessment of Educational Progress, *Learning Science*, 1992.

Table 18-1 Number of high school graduates, percentage of all and minority high school graduates taking the SAT, SAT mean scores, standard deviations, and percentage scoring over 600: 1972–1991

Year	Number of high school graduates[1]	SAT test-takers			Total mean	Verbal			Mathematics		
		Number[1]	As percent of high school graduates[2]	Percent minority		Mean	Standard deviation	Percent scoring 600 or higher	Mean	Standard deviation	Percent scoring 600 or higher
	(in thousands)										
1972	3,001	1,023	34.1	—	937	453	111	11	484	115	17
1973	3,036	1,015	33.4	—	926	445	108	10	481	113	16
1974	3,073	985	32.1	—	924	444	110	10	480	116	17
1975	3,133	996	31.8	—	906	434	109	8	472	115	15
1976	3,148	1,000	31.8	15.0	903	431	110	8	472	120	17
1977	3,155	979	31.0	16.1	899	429	110	8	470	119	16
1978	3,127	989	31.6	17.0	897	429	110	8	468	118	15
1979	3,117	992	31.8	17.1	894	427	110	7	467	117	15
1980	3,043	992	32.6	17.9	890	424	110	7	466	117	15
1981	3,020	994	32.9	18.1	890	424	110	7	466	117	14
1982	2,995	989	33.0	18.3	893	426	110	7	467	117	15
1983	2,888	963	33.4	18.9	893	425	109	7	468	119	16
1984	2,767	965	34.9	19.7	897	426	110	7	471	119	17
1985	2,677	977	36.5	20.0	906	431	111	7	475	119	17
1986	2,643	1,001	37.9	—	906	431	110	8	475	121	17
1987	2,694	1,080	40.1	21.8	906	430	111	8	476	122	18
1988[3]	2,773	1,134	40.9	23.0	904	428	109	7	476	120	17
1989[3]	2,724	1,088	39.9	25.3	903	427	111	8	476	121	18
1990[4]	2,592	1,026	39.6	26.6	900	424	111	7	476	123	18
1991[4]	2,508	1,033	41.2	28.0	896	422	111	7	474	123	17

— Not available. Race/ethnic data not available before 1976.

[1] Includes public and private schools.

[2] The ratio of the number of individuals taking the SAT in the year to the number of high school graduates in the same year expressed as a percentage.

[3] Data for percentage taking the SAT have been revised from previously published figures.

[4] Percentage of public high school graduates taking the SAT is based on state estimates of public high school graduates.

NOTE: Background information needed for specific identification of college-bound seniors was not collected before 1972 for the SAT.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors, 1972–1991*; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, table 95.

Table 18-2 ACT mean scores and percentage taking ACT: School years ending 1987–1991

School year ending	ACT composite	Standard diviation	English	Standard diviation	Mathematics	Standard diviation	Reading	Standard diviation	Science reasoning	Standard diviation	Percent taking ACT[1]
1987[2]	20.8	—	—	—	—	—	—	—	—	—	28.9
1988[2]	20.8	—	—	—	—	—	—	—	—	—	30.4
1989[2]	20.6	—	—	—	—	—	—	—	—	—	31.4
1990[2,3]	20.6	4.6	20.5	5.4	19.9	5.0	—	—	—	—	31.5
1991[3]	20.6	4.5	20.3	5.2	20.0	4.7	21.2	6.1	20.7	4.5	31.8

— Not available.

[1] The ratio of the number of individuals taking the ACT in the year to the number of high school graduates in the same year expressed as a percentage.

[2] Revised from previously published figures.

[3] Percentage taking the ACT is based on only public high school graduates from state estimates.

NOTE: The 1990 and 1991 ACT assessments were significantly different from previous assessments. ACT has established links between scores earned on the ACT administered before October 1989 and scores on the enhanced test. The data for 1987, 1988, and 1989 are estimated average ACT scores.

SOURCE: The American College Testing Program, *The High School Profile Report*, Normative Data, various years.

Table 18-3 ACT scores: School years ending 1970–1989

Year	Composite	English	Mathematics	Social studies	Natural sciences
			Average test scores		
1970	19.9	18.5	20.0	19.7	20.8
1971	19.2	18.0	19.1	18.7	20.5
1972	19.1	17.9	18.8	18.6	20.6
1973	19.2	18.1	19.1	18.3	20.8
1974	18.9	17.9	18.3	18.1	20.8
1975	18.6	17.7	17.6	17.4	21.1
1976	18.3	17.5	17.5	17.0	20.8
1977	18.4	17.7	17.4	17.3	20.9
1978	18.5	17.9	17.5	17.1	20.9
1979	18.6	17.9	17.5	17.2	21.1
1980	18.5	17.9	17.4	17.2	21.1
1981	18.5	17.8	17.3	17.2	21.0
1982	18.4	17.9	17.2	17.3	20.8
1983	18.3	17.8	16.9	17.1	20.9
1984	18.5	18.1	17.3	17.3	21.0
1985	18.6	18.1	17.2	17.4	21.2
1986	18.8	18.5	17.3	17.6	21.4
1987	18.7	18.4	17.2	17.5	21.4
1988	18.8	18.5	17.2	17.4	21.4
1989	18.6	18.5	17.2	17.4	21.4

SOURCE: The American College Testing Program, *The High School Profile Report*, Normative Data, various years.

Table 18-4 Self-reported class rank distribution of SAT test-takers: 1972–1991

Year	Top tenth	Second tenth	Second fifth	Third fifth	Fourth fifth	Lowest fifth
1972	24.0	24.0	27.0	21.0	4.0	1.0
1973	23.0	24.0	27.0	22.0	3.0	0.0
1974	22.0	26.0	28.0	21.0	2.0	0.0
1975	22.0	26.0	29.0	21.0	2.0	0.0
1976	22.7	25.2	28.2	21.9	1.7	0.3
1977	22.8	23.4	26.9	24.0	2.5	0.4
1978	22.1	22.6	26.8	25.2	2.8	0.5
1079	21.8	22.3	26.8	25.7	2.9	0.5
1980	21.6	22.2	26.8	25.9	3.0	0.5
1981	21.4	21.9	26.8	26.3	3.1	0.5
1982	21.5	21.7	26.9	26.3	3.1	0.5
1983	21.8	21.7	26.4	26.3	3.2	0.5
1984	21.4	21.0	26.2	27.2	3.5	0.6
1985	21.1	20.7	26.2	27.8	3.6	0.6
1986	20.7	21.4	27.8	25.4	4.1	0.7
1987	20.7	21.9	28.5	24.3	3.9	0.7
1988	20.6	21.6	28.4	24.7	4.1	0.7
1989	20.8	21.7	28.3	24.5	4.0	0.7
1990	21.0	21.7	28.1	24.5	4.1	0.7
1991	20.7	21.5	27.9	24.9	4.2	0.8

NOTE: Data for years 1972–1975 reported as integers by the College Board.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Table 18-5 SAT verbal scores, by self-reported class rank distribution of SAT test-takers: 1972–1991

Year	Top tenth	Second tenth	Second fifth	Third fifth	Fourth fifth	Lowest fifth
1972	—	—	—	—	—	—
1973	—	—	—	—	—	—
1974	—	—	—	—	—	—
1975	—	—	—	—	—	—
1976	524	456	415	371	348	335
1977	518	452	415	372	347	339
1978	515	450	414	372	349	339
1079	514	448	413	371	347	337
1980	510	446	411	370	346	339
1981	511	447	412	371	348	339
1982	511	449	415	374	349	343
1983	508	447	414	374	351	343
1984	511	450	417	377	353	341
1985	516	455	421	381	357	346
1986	514	454	419	381	360	352
1987	518	456	418	380	358	353
1988	515	454	417	379	358	352
1989	515	453	416	376	354	346
1990	512	449	412	373	351	342
1991	512	448	411	372	350	340

— Not available.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Table 18-6 SAT math scores, by self-reported class rank distribution of SAT test-takers: 1972–1991

Year	Top tenth	Second tenth	Second fifth	Third fifth	Fourth fifth	Lowest fifth
1972	—	—	—	—	—	—
1973	—	—	—	—	—	—
1974	—	—	—	—	—	
1975	—	—	—	—	—	—
1976	580	500	453	400	373	359
1977	574	499	453	401	374	364
1978	570	494	451	400	374	364
1979	568	494	451	400	372	364
1980	568	494	451	401	373	366
1981	567	496	453	402	374	368
1982	568	497	454	404	375	368
1983	570	498	455	403	375	369
1984	575	503	459	406	377	365
1985	577	508	463	411	380	369
1986	579	507	460	410	383	376
1987	585	511	461	409	380	374
1988	585	511	463	411	382	373
1989	585	512	463	410	381	373
1990	585	512	463	410	381	370
1991	584	511	462	409	379	368

— Not available.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Table 18-7 Distribution of SAT test-takers by race/ethnicity and sex: 1976–1991

Year	Race/ethnicity								Sex	
	White	Black	Mexican American	Puerto Rician	Other Hispanic	Asian American	American Indian	Other	Male	Female
1972	—	—	—	—	—	—	—	—	51.2	48.8
1973	—	—	—	—	—	—	—	—	50.8	49.2
1974	—	—	—	—	—	—	—	—	50.0	50.0
1975	—	—	—	—	—	—	—	—	49.9	50.1
1976	85.0	8.2	1.0	0.7	—	2.2	0.3	2.0	49.5	50.5
1977	83.9	8.8	1.7	0.8	—	2.4	0.4	2.1	48.9	51.1
1978	83.0	9.0	1.7	1.0	—	2.6	0.4	2.3	48.4	51.6
1979	82.9	8.9	1.6	1.0	—	2.8	0.4	2.4	48.3	51.7
1980	82.1	9.1	1.7	1.1	—	3.2	0.5	2.3	48.3	51.7
1981	81.9	9.0	1.7	1.1	—	3.4	0.6	2.2	48.1	51.9
1982	81.7	8.9	1.8	1.2	—	3.8	0.5	2.2	48.2	51.8
1983	81.1	8.8	1.9	1.2	—	4.2	0.5	2.2	48.3	51.7
1984	80.3	9.1	2.0	1.3	—	4.5	0.5	2.3	48.2	51.8
1985	80.0	8.9	2.2	1.2	—	4.8	0.5	2.4	48.3	51.7
1986	—	—	—	—	—	—	—	—	48.1	51.9
1987	78.2	8.7	2.1	1.0	1.9	5.8	1.0	1.2	48.2	51.8
1988	77.0	9.2	2.2	1.1	1.9	6.1	1.2	1.3	48.0	52.0
1989	74.7	9.6	2.5	1.1	2.1	6.8	1.8	1.3	47.9	52.1
1990	73.4	10.0	2.8	1.2	2.5	7.6	1.1	1.5	47.8	52.2
1991	72.0	10.5	3.0	1.3	2.7	8.0	0.8	1.7	47.8	52.2

— Not available.

Note: The first year for which SAT scores by race/ethnic group are available is 1976.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Table 18-8 SAT average verbal score, by race/ethnicity and sex: 1976–1991

Year	All	Race/ethnicity								Sex	
		White	Black	Mexican American	Puerto Rician	Other Hispanic	Asian American	American Indian	Other	Male	Female
1972	—	—	—	—	—	—	—	—	—	454	452
1973	—	—	—	—	—	—	—	—	—	446	443
1974	—	—	—	—	—	—	—	—	—	447	442
1975	—	—	—	—	—	—	—	—	—	437	431
1976	431	451	332	371	364	—	414	388	410	433	430
1977	429	448	330	370	355	—	405	390	402	431	427
1978	429	446	332	370	349	—	401	387	399	433	425
1979	427	444	330	370	345	—	396	386	393	431	423
1980	424	442	330	372	350	—	396	390	394	428	420
1981	424	442	332	373	353	—	397	391	388	430	418
1982	426	444	341	377	360	—	398	388	392	431	421
1983	425	443	339	375	358	—	395	388	386	430	420
1984	426	445	342	376	358	—	398	390	388	433	420
1985	431	449	346	382	368	—	404	392	391	437	425
1986	431	—	—	—	—	—	—	—	—	437	426
1987	430	447	351	379	360	387	405	393	405	435	425
1988	428	445	353	382	355	387	408	393	410	435	422
1989	427	446	351	381	360	389	409	384	414	434	421
1990	424	442	352	380	359	383	410	388	410	429	419
1991	422	441	351	377	361	382	411	393	411	426	418

— Not available.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Table 18-9 SAT average mathematics score, by race/ethnicity and sex: 1976–1991

Year	All	Race/ethnicity								Sex	
		White	Black	Mexican American	Puerto Rician	Other Hispanic	Asian American	American Indian	Other	Male	Female
1972	—	—	—	—	—	—	—	—	—	505	461
1973	—	—	—	—	—	—	—	—	—	502	460
1974	—	—	—	—	—	—	—	—	—	501	459
1975	—	—	—	—	—	—	—	—	—	495	449
1976	472	493	354	410	401	—	518	420	458	497	446
1977	470	489	357	408	397	—	514	421	457	497	445
1978	468	485	354	402	388	—	510	419	450	494	444
1979	467	483	358	410	388	—	511	421	447	493	443
1980	466	482	360	413	394	—	509	426	449	491	443
1981	466	483	362	415	398	—	513	425	447	492	443
1982	467	483	366	416	403	—	513	424	449	493	443
1983	468	484	369	417	403	—	514	425	446	493	445
1984	471	487	373	420	405	—	519	427	450	495	449
1985	475	490	376	426	409	—	518	428	448	499	452
1986	475	—	—	—	—	—	—	—	—	501	451
1987	476	489	377	424	400	432	521	432	455	500	453
1988	476	490	384	428	402	433	522	435	460	498	455
1989	476	491	386	430	406	436	525	428	467	500	454
1990	476	491	385	429	405	434	528	437	467	499	455
1991	474	489	385	427	406	431	530	437	466	497	453

— Not available.

SOURCE: College Entrance Examination Board, *National Report: College Bound Seniors*, 1972–1991.

Note on interpreting SAT test scores

According to the College Board, the Scholastic Aptitude Test (SAT) is designed to measure verbal and quantitative reasoning skills related to academic performance in college. SAT scores are statistically controlled to maintain the same meaning from year to year, and therefore useful comparisons over time can be made.[1]

Since 1941, SAT scores have been expressed relative to the performance of a group of approximately 11,000 candidates who took the test in 1941.[2] In order that scores could be compared to this reference group, a short set of common items is included in each year's forms. Each new form is then linked with a previous form, which in turn links back to the 1941 form. A score of 500 on any form of the SAT corresponds to the mean of the 1941 group; and a score of 600 falls one standard deviation above the mean of the 1941 group.[3]

The decline or rise of test scores depends on *many* factors. Changes can involve variations in the composition of the test-takers. For example, between 1963 and 1970, a significant SAT score decline occurred. Because of a continuing increase in the proportion of high school graduates going to college over this period, the group of test-takers became progressively less selective in the cognitive skills measured by the test, and this likely was a major factor in the score decline.[4] The College Board notes that the relationship between SAT test scores and student characteristics are "complex and interdependent."[5] For example, educational, demographic, and socioeconomic factors might influence test scores. However, while these factors may be related, they are not necessarily causal. Moreover, changes in test scores can also be related to variations in performance among similar types of test-takers.

Standard Deviation Units

Performance on the SAT can be measured in a number of ways. Changes in standard deviation units is one useful metric. Standard deviation units indicate how scores, on average, deviate from the mean. Since the standard deviation is measured on a *common scale* across different tests, it can also be used to compare score changes on a variety of measures.[6]

Once changes in scores across measures have been noted, the significance of these changes should be considered. Some have considered a decline of one standard deviation to be significant. This designation, however, is arbitrary.[7] In *Investment in Learning*, Howard Bowen provides some guidelines for describing changes in standard deviation units.[8]

Estimated change as expressed in SDUs	Descriptive judgment
+.75 or above	Extreme increase
+.40 to .74	Large increase
+.20 to .39	Moderate increase
+.10 to .19	Small increase
-.09 to +.09	No change
-.10 to -.19	Small decline
-.20 to -.39	Moderate decline
-.40 to -.74	Large decline
-.75 or below	Extreme decline

Changes in standard deviation units are calculated using the following formula:

$$\frac{\mu_1 - \mu_2}{\sqrt{\frac{1}{2}(\sigma_1^2 + \sigma_2^2)}}$$

where μ_1 and μ_2 are the mean scores in years 1 and 2, respectively, and σ_1 and σ_2 are the standard deviations of scores in years 1 and 2, respectively.

For example, the second highlighted result on page 54 noted that between 1980 and 1985 SAT verbal scores increased 7 points and between 1980 and 1987 math scores increased 10 points.

Applying the above formula, the following standard deviation units are produced.

Verbal: 431-424/110.5 = +.063

Math: 476-466/119.5 = +.084

According to Bowen's template, the changes in standard deviation units suggest no significant change in scores in this period. Using the same calculation, the decline in verbal and mathematics scores from 1972 to 1991 were -.279 and -.083, respectively—modest and not significant declines.

NOTES:

[1] College Entrance Examination Board. *National Report: College-Bound Seniors*, 1991.

[2] Anastasi, Anne. *Psychological Testing*. MacMillan, Fifth edition, 1982, p. 90.

[3] College Entrance Examination Board. *National Report*.

[4] College Entrance Examination Board. *On Further Examination: Report on the Advisory Panel on the Advisory Panel on the Scholastic Aptitude Test Score Decline*, 1977.

[5] College Board. *National Report*.

[6] The Congress of the United States, Congressional Budget Office. *Trends in Educational Achievement*, April, 1986.

[7] Adelman, Clifford. *The Standardization of Test Scores of College Graduates 1964-1982*. National Institute of Education, 1985, p. 11.

[8] Bowen, Howard. *Investment in Learning*. Jossey-Bass, 1977.

Table 19-1 Scores on the Graduate Record Examination (GRE) and the number of GRE test-takers: Academic years ending 1965–1991

Year	Number of BAs	GRE test-takers		GRE scores				
					Verbal		Quantitative	
		Number	As percent of BAs[1]	Total	Mean	Standard deviation	Mean	Standard deviation
1965	501,713	93,792	18.7	1,063	530	124	533	137
1966	520,923	123,960	23.8	1,048	520	124	528	133
1967	558,852	151,134	27.0	1,047	519	125	528	134
1968	632,758	182,432	28.8	1,047	520	124	527	135
1969	729,071	206,113	28.3	1,039	515	124	524	132
1970	792,656	265,359	33.5	1,019	503	123	516	132
1971	839,730	293,600	35.0	1,009	497	125	512	134
1972	887,273	293,506	33.1	1,002	494	126	508	136
1973	922,362	290,104	31.5	1,009	497	125	512	135
1974	945,776	301,070	31.8	1,001	492	126	509	137
1975	922,933	298,335	32.3	1,001	493	125	508	137
1976	925,746	299,292	32.3	1,002	492	127	510	138
1977	919,549	287,715	31.3	1,004	490	129	514	139
1978	921,204	286,383	31.1	1,002	484	128	518	135
1979	921,390	282,482	30.7	993	476	130	517	135
1980	929,417	272,281	29.3	996	474	131	522	136
1981	935,140	262,855	28.1	996	473	128	523	136
1982	952,998	256,381	26.9	1,002	469	130	533	137
1983	969,510	263,674	27.2	1,014	473	131	541	138
1984	974,309	265,221	27.2	1,016	475	130	541	139
1985	979,477	271,972	27.8	1,019	474	126	545	140
1986	987,823	279,428	28.3	1,027	475	126	552	140
1987	991,339	293,560	29.6	1,027	477	126	550	140
1988	994,829	303,703	30.5	1,040	483	123	557	140
1989	[2]1,017,667	326,096	[2]32.0	1,044	484	125	560	142
1990	[3]1,043,000	344,572	[3]33.0	1,048	486	123	562	143
1991	[4]1,064,000	379,882	[4]35.7	1,047	485	122	562	141

[1] Ratio of the number of GRE test-takers to the number of baccalaureate degrees awarded expressed as a percentage.

[2] Revised from previously published data.

[3] Estimated.

[4] Projected.

SOURCE: Education Testing Service. U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, Table 228 (based on IPEDS/HEGIS surveys of degrees conferred).

Table 19-2 Characteristics of Graduate Record Examination (GRE) test-takers: Academic years ending 1976–1988

Academic year ending	U.S. citizen percent	English not preferred language
1976	92.5	6.0
1977	91.3	6.0
1978	91.1	6.0
1978*	89.1	—
1979	90.0	8.0
1980	89.3	8.0
1981	86.8	9.0
1982	86.7	10.2
1983	86.1	10.8
1984	85.9	11.4
1985	84.9	11.8
1986	84.5	12.4
1987	84.2	12.7
1988*	79.5	—

— Not available.

*Based on revised procedures including an improved sample and data handling procedures. See Wah and Robinson (1990).

SOURCE: Wah, Diane M. and Dawn S. Robinson, *Examinee and Score Trends for the GRE General Test: 1977–78, 1982–83, 1986–87, and 1987–88*, Educational Testing Service, 1990. Graduate Record Examination Board, *A Summary of Data Collected from Graduate Record Examinations Test-Takers During 1986-87: Data Summary Report #12*, June 1988 and earlier editions.

Table 19-3 Graduate Record Examination (GRE) scores for U.S. citizens only: Academic years ending 1973–1988

Academic year ending	Total	Verbal			Quantitative		
		Mean	Standard deviation	Percent scoring 500 or higher	Mean	Standard deviation	Percent scoring 500 or higher
1973	1,010	500	—	—	510	—	—
1974	1,003	498	—	—	505	—	—
1975	1,004	497	—	—	507	—	—
1976	1,005	498	—	—	507	—	—
1977	1,004	495	—	—	509	—	—
1978	1,003	491	—	—	512	—	—
1979	1,011	499	118	49.7	512	130	53.8
1980	1,013	500	117	50.1	513	129	54.7
1981	1,015	499	115	50.8	516	130	55.8
1982	1,019	498	115	49.4	521	132	58.8
1983	1,032	503	117	50.9	529	133	59.7
1984	1,032	504	116	50.7	528	134	58.4
1985	1,029	502	114	49.9	527	134	58.6
1986	1,038	506	113	52.0	532	134	60.2
1987	1,036	505	115	51.5	531	134	59.5
1988*	1,045	508	114	—	537	135	—

— Not available.

* Based on revised procedures. See Wah and Robinson (1990).

SOURCE: Wah, Diane M. and Dawn S. Robinson, *Examinee and Score Trends for the GRE General Test: 1977–78, 1982–83, 1986–87, and 1987–88*, Educational Testing Service, 1990; Graduate Record Examination Board, *A Summary of Data Collected from Graduate Record Examinations Test-Takers During 1986–87: Data Summary Report #12*, June 1988 and earlier editions.

Table 20-1 High school dropout, completion, and enrollment rates for 24- to 25-year-olds: 1973–1990

Year	Status dropout rates				High school completion rates				High school enrollment rates			
	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	15.8	12.8	27.7	40.0	83.6	86.7	70.9	58.5	0.6	0.4	1.4	1.5
1974	14.7	11.5	25.1	41.6	84.8	88.2	73.8	56.0	0.5	0.3	1.1	2.3
1975	14.8	10.9	27.3	47.5	84.4	88.4	71.6	51.2	0.8	0.7	1.1	1.3
1976	13.8	10.3	25.2	40.7	85.6	89.1	74.3	57.7	0.6	0.6	0.5	1.6
1977	14.1	10.8	24.4	43.1	85.4	88.8	75.4	54.8	0.5	0.4	0.2	2.2
1978	14.4	11.6	21.5	42.1	85.1	88.1	77.4	57.4	0.5	0.3	1.1	0.5
1979	14.9	11.2	23.3	46.2	84.5	88.4	75.3	51.6	0.6	0.4	1.3	2.3
1980	15.4	11.7	24.6	44.1	83.9	87.7	74.3	54.9	0.7	0.5	1.0	1.0
1981	15.0	11.5	23.1	38.0	84.4	88.1	75.1	61.6	0.6	0.4	1.7	0.4
1982	14.4	11.2	20.8	40.0	84.8	88.2	77.3	59.2	0.8	0.6	1.8	0.7
1983	13.8	10.7	20.6	39.5	85.7	89.1	78.2	59.0	0.5	0.3	1.2	1.5
1984	14.2	10.7	22.1	37.9	85.2	89.0	76.6	60.4	0.6	0.4	1.3	1.7
1985	13.7	9.8	20.2	35.3	86.0	90.0	79.0	63.6	0.3	0.2	0.8	1.0
1986	13.6	10.4	15.5	35.8	85.8	89.3	83.5	62.6	0.6	0.2	1.1	1.6
1987[2]	14.8	12.1	14.8	35.3	84.7	87.6	83.8	64.4	0.5	0.3	1.5	0.4
1988[2]	14.2	10.6	14.2	39.6	85.5	89.1	85.7	60.0	0.3	0.3	0.1	0.4
1989[2]	13.7	9.6	14.3	40.8	86.0	90.3	85.0	58.5	0.3	0.1	0.7	0.7
1990[2]	14.2	9.3	17.1	44.6	85.4	90.4	82.2	54.8	0.4	0.4	0.7	0.6

[1] Included in the total are individuals who are not Hispanics, black, or white; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alakan natives.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

NOTE: Status dropout rates measure the number of 28- to 29-year-olds who had not completed high school and were not currently enrolled in school. High school completion rates measure the number of individuals 28- to 29-year-olds who have completed 12 or more years of school. High school enrollment rates measure those 28- to 29-year-olds currently enrolled in high school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 20-2 High school dropout, completion, and enrollment rates for 28- to 29-year-olds: 1973–1990

Year	Status dropout rates				High school completion rates				High school enrollment rates			
	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	19.5	16.5	32.3	49.8	80.3	83.4	67.0	50.2	0.2	0.1	0.8	0.0
1974	18.1	14.5	30.5	51.0	81.6	85.3	68.9	48.5	0.3	0.2	0.7	0.5
1975	15.9	12.9	30.2	42.4	83.6	86.8	69.0	56.6	0.5	0.4	0.8	1.0
1976	16.1	12.5	28.7	48.2	83.3	87.1	70.4	49.7	0.6	0.5	0.8	2.1
1977	14.3	11.1	23.5	43.6	85.1	88.4	75.5	56.0	0.6	0.6	1.0	0.4
1978	13.7	10.5	21.4	42.9	86.0	89.3	78.4	56.2	0.3	0.3	0.2	0.9
1979	13.7	10.3	22.1	42.0	86.0	89.5	77.2	56.6	0.3	0.2	0.7	1.3
1980	13.1	9.9	19.6	39.6	86.6	89.8	79.8	59.3	0.3	0.2	0.5	1.1
1981	12.9	9.3	20.8	40.8	86.6	90.5	78.3	57.4	0.5	0.2	0.9	1.8
1982	12.1	9.2	18.3	37.1	87.6	90.6	81.7	61.5	0.3	0.2	-0.0	1.4
1983	12.7	9.6	16.7	41.8	86.8	90.1	82.9	56.8	0.4	0.3	0.4	1.4
1984	13.5	10.2	19.9	39.3	86.2	89.6	79.4	60.1	0.3	0.2	0.7	0.6
1985	13.6	10.4	15.8	39.5	86.0	89.2	83.8	60.1	0.4	0.4	0.4	0.5
1986	13.6	10.1	17.5	39.1	85.9	89.7	81.7	59.4	0.4	0.2	0.8	1.4
1987[2]	13.4	9.8	15.9	39.6	86.4	90.0	83.9	59.5	0.3	0.2	0.2	0.9
1988[2]	13.7	9.9	15.7	40.9	86.1	89.9	84.3	58.3	0.2	0.2	0.0	0.9
1989[2]	13.0	9.1	18.4	39.1	86.6	90.7	81.2	59.4	0.4	0.2	0.4	1.5
1990[2]	13.4	9.0	20.3	38.7	86.4	90.7	79.5	61.1	0.3	0.2	0.3	0.2

[1] Included in the total are individuals who are not Hispanics, black, or white; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alakan natives.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

NOTE: See note to table 20-1.
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 20-3 Standard errors for estimated percentages in text table for *Indicator 20*

Year	Status dropout rates				High school completion rates				High school enrollment rates			
	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	1.8	1.7	4.4	6.2	0.7	0.6	2.4	4.0	1.9	1.8	5.0	7.8
1974	1.7	1.7	4.4	5.9	0.8	0.7	2.4	3.5	1.9	1.8	4.8	6.9
1975	1.7	1.7	4.1	6.0	0.7	0.7	2.2	3.5	1.9	1.8	4.5	7.1
1976	1.7	1.6	4.0	5.5	0.7	0.6	2.2	3.4	1.8	1.7	4.4	6.5
1977	1.7	1.7	4.2	5.5	0.7	0.6	2.2	3.3	1.8	1.8	4.5	6.6
1978	1.7	1.7	4.0	5.4	0.7	0.6	2.2	3.4	1.8	1.8	4.4	6.6
1979	1.7	1.6	4.0	5.5	0.7	0.7	2.2	3.3	1.8	1.7	4.6	6.6
1980	1.7	1.6	4.1	4.5	0.7	0.6	2.1	3.0	1.8	1.7	4.6	5.9
1981	1.7	1.7	4.1	4.8	0.7	0.6	2.1	3.0	1.8	1.8	4.5	5.8
1982	1.7	1.8	4.3	5.4	0.7	0.7	2.3	3.3	1.8	1.9	4.7	6.5
1983	1.7	1.8	4.3	5.3	0.7	0.7	2.2	3.2	1.8	1.9	4.8	6.3
1984	1.7	1.9	4.4	5.8	0.7	0.7	2.1	3.4	1.9	2.0	4.7	6.8
1985	1.8	1.9	4.4	5.6	0.7	0.7	2.2	3.2	1.9	2.0	4.7	6.5
1986	1.8	2.0	4.5	5.4	0.7	0.7	2.2	3.0	1.9	2.1	4.8	6.2
1987[2]	1.8	2.0	4.7	5.0	0.7	0.7	2.1	2.9	1.9	2.1	5.0	5.8
1988[2]	1.8	2.2	5.1	5.1	0.8	0.8	2.5	3.3	2.0	2.3	5.6	6.5
1989[2]	1.8	2.2	4.9	5.2	0.8	0.8	2.3	3.2	1.9	2.3	5.2	6.2
1990[2]	1.8	2.2	5.0	5.1	0.7	0.8	2.3	3.1	1.9	2.3	5.2	6.1

[1] Included in the total are individuals who are not Hispanics, black, or white; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alakan natives.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

NOTE: See note to table 20-1.
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 20-4 Standard errors for estimated percentages in table 20-1

Year	Status dropout rates				High school completion rates				High school enrollment rates			
	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	1.8	1.8	4.6	6.6	0.7	0.6	2.4	4.2	2.0	1.9	5.4	8.4
1974	1.9	1.8	4.8	6.1	0.7	0.6	2.4	4.0	2.1	1.9	5.5	7.9
1975	1.8	1.8	4.7	5.5	0.7	0.6	2.5	3.8	1.9	1.9	5.4	7.5
1976	1.8	1.8	4.8	5.7	0.7	0.6	2.4	3.7	2.0	1.9	5.6	7.3
1977	1.8	1.7	4.5	5.6	0.7	0.6	2.3	3.7	2.0	1.8	5.2	7.4
1978	1.8	1.7	4.7	5.4	0.7	0.6	2.2	3.5	2.0	1.8	5.2	7.1
1979	1.8	1.7	4.5	5.2	0.7	0.6	2.2	3.5	1.9	1.8	5.1	6.9
1980	1.7	1.7	4.4	4.9	0.7	0.6	2.2	3.2	1.9	1.8	5.0	6.5
1981	1.7	1.7	4.1	4.8	0.7	0.6	2.0	3.0	1.8	1.8	4.6	6.1
1982	1.7	1.8	4.4	5.2	0.6	0.6	2.1	3.3	1.8	1.9	4.9	6.7
1983	1.7	1.8	4.5	5.3	0.6	0.6	2.1	3.3	1.7	1.9	5.0	6.7
1984	1.7	1.8	4.3	5.2	0.6	0.6	2.1	3.2	1.8	1.9	4.8	6.5
1985	1.7	1.8	4.5	4.6	0.6	0.6	2.1	2.8	1.7	1.9	5.0	5.7
1986	1.7	1.8	4.5	4.6	0.6	0.6	1.8	2.8	1.9	1.9	4.9	5.7
1987[2]	1.7	1.8	4.6	4.7	0.7	0.6	1.8	2.8	1.8	1.9	5.0	5.8
1988[2]	1.7	2.0	4.8	4.6	0.6	0.7	1.8	2.9	1.7	2.1	5.2	6.0
1989[2]	1.7	2.1	5.0	4.7	0.6	0.6	1.9	3.0	1.9	2.2	5.4	6.0
1990[2]	1.8	2.2	5.1	4.6	0.7	0.7	2.1	3.0	1.9	2.3	5.6	6.1

[1] Included in the total are individuals who are not Hispanics, black, or white; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alakan natives.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

NOTE: See note to table 20-1.
SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 20-5 Standard errors for estimated percentages in table 20-2

Year	Status dropout rates				High school completion rates				High school enrollment rates			
	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic	Total[1]	White	Black	Hispanic
1973	2.0	1.9	5.2	6.7	0.9	0.8	3.0	4.8	2.2	2.1	6.3	0.0
1974	2.0	1.9	5.2	6.5	0.9	0.7	2.9	4.6	2.2	2.1	6.2	9.2
1975	1.9	1.8	5.1	6.2	0.7	0.6	2.8	4.1	2.0	1.9	6.0	8.2
1976	1.8	1.7	4.7	5.4	0.7	0.6	2.5	3.8	2.0	1.9	5.5	7.5
1977	1.9	1.8	4.7	6.0	0.7	0.6	2.3	3.9	2.0	1.9	5.3	7.9
1978	1.9	1.8	4.9	5.6	0.7	0.6	2.3	3.7	2.0	1.9	5.5	7.3
1979	1.8	1.8	4.6	5.4	0.7	0.6	2.2	3.5	2.0	1.9	5.2	7.0
1980	1.8	1.8	4.8	5.3	0.7	0.6	2.2	3.3	1.9	1.9	5.4	6.7
1981	1.8	1.7	4.6	4.9	0.6	0.5	2.1	3.1	1.9	1.8	5.1	6.3
1982	1.7	1.8	5.0	5.7	0.6	0.6	2.1	3.5	1.9	1.9	0.0	7.1
1983	1.7	1.8	4.9	5.1	0.6	0.6	2.0	3.3	1.8	1.9	5.3	6.6
1984	1.7	1.8	4.6	5.2	0.6	0.6	2.1	3.2	1.8	1.9	5.1	6.6
1985	1.7	1.8	4.6	4.7	0.6	0.6	1.8	3.0	1.8	1.9	5.0	6.0
1986	1.7	1.8	4.5	4.7	0.6	0.6	1.9	3.0	1.8	1.9	4.9	6.0
1987[2]	1.7	1.8	4.6	4.4	0.6	0.6	1.8	2.8	1.8	1.9	5.0	5.7
1988[2]	1.7	2.0	5.1	4.6	0.6	0.6	2.0	3.0	1.8	2.1	0.0	6.0
1989[2]	1.7	1.9	4.8	5.0	0.6	0.6	2.1	3.2	1.8	2.0	5.3	6.4
1990[2]	1.7	2.0	5.0	4.9	0.6	0.6	2.3	3.0	1.8	2.1	5.6	6.2

[1] Included in the total are individuals who are not Hispanics, black, or white; most of these individuals are Asian/Pacific Islanders and some are American Indian/Alakan natives.

[2] Numbers from these years reflect new editing procedures instituted by the Bureau of the Census in 1986 for cases with missing data on school enrollment items.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 22-1 Percentage of 25- to 29-year olds who have completed 12 or more years of schooling, by race/ethnicitiy and sex: 1971–1991

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	77.7	79.0	76.5	81.7	83.0	80.4	53.9	52.3	55.3	44.8	46.8	43.3
1972	79.8	80.5	79.2	83.4	84.1	82.7	64.0	61.1	66.4	45.9	46.2	45.7
1973	80.2	80.6	79.8	84.1	84.2	83.9	64.7	64.4	64.9	52.0	53.5	50.6
1974	81.9	83.1	80.8	85.5	86.0	85.0	66.4	68.9	64.5	51.3	51.4	51.1
1975	83.1	84.5	81.8	86.6	88.0	85.2	69.4	69.1	69.6	54.8	54.8	55.4
1976	84.7	86.0	83.5	87.7	89.0	86.4	75.4	74.2	76.3	58.8	59.5	58.2
1977	85.4	86.6	84.2	88.6	89.2	88.0	72.2	76.3	68.9	55.4	59.3	52.4
1978	85.3	86.0	84.6	88.5	88.8	88.2	75.3	76.5	74.2	56.6	57.9	55.2
1979	85.6	86.3	84.9	89.2	89.8	88.5	76.4	77.7	75.8	56.0	54.0	57.7
1980	85.4	85.4	85.5	89.2	89.1	89.2	74.9	71.0	78.1	58.4	56.9	60.0
1981	86.3	86.5	86.1	89.8	89.7	89.9	76.3	78.2	74.6	60.4	61.4	59.6
1982	86.2	86.4	86.1	89.1	89.1	89.1	79.2	78.6	79.8	58.4	57.3	59.2
1983	86.0	86.0	86.0	89.3	89.2	89.3	81.0	80.5	81.3	58.9	59.0	58.8
1984	85.9	85.6	86.3	89.4	89.4	89.4	78.7	76.6	80.6	58.3	55.6	60.7
1985	86.1	85.9	86.4	89.5	89.2	89.9	78.3	76.9	79.5	61.1	59.2	62.7
1986	86.1	85.9	86.4	89.6	88.8	90.4	82.6	85.6	80.0	56.6	55.9	57.3
1987	86.0	85.5	86.4	89.4	88.9	90.0	83.7	87.2	80.7	58.4	57.1	59.7
1988	85.9	84.7	87.1	89.7	88.4	90.9	83.5	81.9	84.9	63.0	61.3	64.9
1989	85.5	84.5	86.5	89.3	88.2	90.4	79.7	77.1	82.0	60.8	59.8	61.7
1990	85.7	84.4	87.0	90.1	88.6	91.6	81.8	81.5	82.0	58.2	56.6	59.9
1991	85.4	84.9	85.8	89.8	89.2	90.5	80.7	80.4	80.9	55.9	55.7	56.3

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 22-2 Percentage of 25- to 29-year-old high school graduates who have completed 1 or more years of college, by race/ethnicitiy and sex: 1971–1991

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	43.6	48.7	38.4	44.9	50.2	39.5	24.6	23.0	25.8	24.9	32.4	18.5
1972	45.1	50.7	39.5	46.3	52.3	40.2	33.3	31.2	35.0	29.7	35.9	24.2
1973	45.3	51.4	39.4	46.6	53.0	40.2	34.1	34.7	33.5	31.2	38.6	24.5
1974	48.9	53.8	44.1	50.4	55.6	45.2	33.5	34.5	32.7	36.1	39.2	32.7
1975	50.1	56.0	44.1	51.2	57.3	44.9	37.2	38.2	36.4	42.9	52.8	34.3
1976	52.1	58.2	46.0	53.8	60.1	47.4	38.3	41.7	35.8	37.1	44.1	31.0
1977	53.2	58.0	48.5	54.8	59.9	49.7	39.9	43.4	36.8	38.3	40.2	36.5
1978	54.4	59.3	49.6	55.9	61.5	50.3	43.3	43.8	43.0	43.7	46.6	40.7
1979	54.1	57.7	50.6	55.7	59.4	51.9	43.1	43.6	42.9	42.8	49.4	37.3
1980	52.3	55.8	49.0	53.8	57.3	50.3	40.9	40.6	41.1	40.4	45.3	35.9
1981	50.1	52.7	47.5	51.2	54.1	48.3	41.5	42.5	40.6	40.1	43.8	36.8
1982	49.9	51.5	48.3	50.7	52.2	49.1	44.6	46.1	43.4	36.9	37.1	36.7
1983	50.6	52.1	49.0	51.6	53.4	49.7	42.6	43.1	42.1	43.4	42.3	44.5
1984	50.1	50.9	49.2	51.0	51.7	50.3	41.4	42.2	40.8	45.3	46.4	44.2
1985	50.8	51.5	50.1	51.8	52.5	51.2	41.1	39.6	42.3	44.3	46.5	42.3
1986	51.0	51.3	50.7	52.3	52.8	51.8	42.8	41.0	44.5	40.4	40.5	40.3
1987	50.7	50.4	51.0	51.4	51.5	51.4	43.2	40.3	45.7	43.3	44.8	41.8
1988	50.8	51.6	50.1	51.8	52.4	51.2	43.1	43.8	42.5	45.5	45.5	45.7
1989	51.3	52.0	50.5	52.8	53.4	52.2	40.2	39.7	40.7	44.2	43.7	44.5
1990	52.0	51.8	52.1	53.6	53.4	53.8	44.1	43.1	45.0	40.2	40.4	39.8
1991	53.1	52.3	53.8	54.9	54.7	55.2	42.5	35.8	48.2	41.3	40.1	42.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 22-3 Percentage of 25- to 29-year-old high school graduates who have completed 4 or more years of college, by race/ethnicitiy and sex: 1971–1991

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	22.0	25.8	18.1	23.1	27.0	19.1	12.5	13.1	12.0	11.3	17.6	6.2
1972	23.7	27.3	20.2	24.9	28.6	21.1	13.1	11.7	14.3	8.1	9.7	6.7
1973	23.6	26.8	20.5	24.8	28.3	21.3	12.6	11.1	13.7	11.1	12.6	9.7
1974	25.3	28.7	21.8	27.2	31.1	23.2	11.8	12.8	11.2	10.6	9.3	12.0
1975	26.3	29.8	22.9	27.5	31.1	23.7	15.1	16.0	14.3	16.1	19.2	13.4
1976	28.0	32.0	24.1	29.3	33.4	25.1	17.3	16.2	18.2	12.5	17.3	8.2
1977	28.1	31.2	25.1	29.8	33.4	26.3	17.5	16.8	18.1	12.0	12.2	12.2
1978	27.3	30.2	24.4	28.9	32.5	25.3	15.6	14.0	17.0	17.1	16.6	17.7
1979	27.0	29.9	24.2	28.6	31.6	25.5	16.2	17.1	15.6	13.0	14.6	11.6
1980	26.3	28.1	24.5	28.0	30.1	26.0	15.4	14.8	15.9	13.1	14.7	11.6
1981	24.7	26.6	22.8	26.3	28.4	24.2	15.2	15.5	14.8	12.4	13.9	11.0
1982	25.2	27.0	23.4	26.7	28.8	24.6	16.0	14.9	16.8	16.6	18.6	14.9
1983	26.2	27.8	24.6	27.4	29.4	25.4	15.9	16.2	15.6	17.7	16.5	19.1
1984	25.5	27.1	24.0	27.0	28.5	25.4	14.8	16.9	13.2	18.2	17.1	19.0
1985	25.7	26.9	24.6	27.3	28.6	26.0	14.8	13.5	15.8	18.1	18.4	17.9
1986	26.0	26.7	25.3	28.1	29.1	27.1	14.3	12.0	16.4	16.0	16.1	15.9
1987	25.6	26.1	25.2	27.6	28.0	27.1	13.8	13.6	13.9	14.9	16.1	13.7
1988	26.4	27.6	25.2	28.0	29.1	26.9	14.4	15.2	13.8	17.9	19.4	16.4
1989	27.3	28.3	26.5	29.5	30.5	28.5	15.8	15.7	16.1	16.6	16.0	17.2
1990	27.1	28.0	26.3	29.3	30.0	28.6	16.4	18.6	14.5	14.0	12.9	15.2
1991	27.2	27.0	27.3	29.7	29.7	29.8	13.6	14.3	13.0	16.4	14.6	18.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 22-4 Standard errors for estimated percentages in table 22-1

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	0.5	0.7	0.7	0.5	0.7	0.7	2.2	3.2	3.0	2.8	4.2	3.8
1972	0.5	0.7	0.7	0.5	0.7	0.7	2.1	3.2	2.8	2.8	4.2	3.9
1973	0.5	0.7	0.7	0.5	0.7	0.7	2.0	3.0	2.7	2.5	3.7	3.4
1974	0.4	0.6	0.6	0.4	0.6	0.6	2.0	2.9	2.7	2.4	3.5	3.3
1975	0.4	0.6	0.6	0.4	0.6	0.6	1.9	2.8	2.5	2.4	3.5	3.4
1976	0.4	0.5	0.6	0.4	0.5	0.6	1.7	2.6	2.3	2.4	3.5	3.3
1977	0.4	0.5	0.6	0.4	0.5	0.6	1.7	2.4	2.4	2.5	3.6	3.4
1978	0.4	0.5	0.6	0.4	0.5	0.6	1.6	2.4	2.2	2.3	3.3	3.2
1979	0.4	0.5	0.5	0.4	0.5	0.5	1.6	2.3	2.2	2.3	3.4	3.2
1980	0.4	0.5	0.5	0.4	0.5	0.5	1.5	2.4	2.0	2.1	3.1	3.0
1981	0.4	0.5	0.5	0.3	0.5	0.5	1.5	2.1	2.1	2.0	2.9	2.8
1982	0.4	0.5	0.5	0.4	0.5	0.5	1.5	2.2	2.0	2.1	3.1	2.9
1983	0.4	0.5	0.5	0.4	0.5	0.5	1.4	2.1	1.9	2.1	3.0	3.0
1984	0.4	0.5	0.5	0.4	0.5	0.5	1.4	2.2	1.9	2.1	3.0	2.8
1985	0.4	0.5	0.5	0.4	0.5	0.5	1.4	2.2	1.9	2.1	3.0	2.9
1986	0.4	0.5	0.5	0.4	0.5	0.5	1.3	1.8	1.9	2.0	2.8	2.8
1987	0.4	0.5	0.5	0.4	0.5	0.5	1.3	1.7	1.8	2.0	2.8	2.8
1988	0.4	0.5	0.5	0.4	0.5	0.5	1.3	2.0	1.7	1.9	2.6	2.7
1989	0.4	0.6	0.5	0.4	0.6	0.5	1.5	2.3	1.9	2.2	3.1	3.2
1990	0.4	0.6	0.5	0.4	0.6	0.5	1.4	2.1	1.9	2.2	3.1	3.2
1991	0.4	0.6	0.6	0.4	0.6	0.6	1.5	2.2	2.0	2.3	3.2	3.3

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 22-5 Standard errors for estimated percentages in table 22-2

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	0.7	1.0	0.9	0.7	1.0	1.0	2.6	3.8	3.5	3.7	5.7	4.5
1972	0.7	0.9	0.9	0.7	1.0	1.0	2.6	3.9	3.4	3.9	5.9	5.0
1973	0.6	0.9	0.9	0.7	1.0	1.0	2.5	3.7	3.3	3.2	4.9	4.1
1974	0.6	0.9	0.9	0.7	1.0	1.0	2.4	3.5	3.2	3.3	4.8	4.4
1975	0.6	0.9	0.9	0.7	0.9	0.9	2.3	3.5	3.1	3.2	4.7	4.3
1976	0.6	0.8	0.8	0.6	0.9	0.9	2.2	3.4	2.9	3.1	4.6	4.1
1977	0.6	0.8	0.8	0.6	0.9	0.9	2.2	3.3	3.0	3.3	4.6	4.5
1978	0.6	0.8	0.8	0.6	0.9	0.9	2.2	3.3	2.9	3.0	4.4	4.2
1979	0.6	0.8	0.8	0.6	0.9	0.9	2.1	3.2	2.9	3.1	4.6	4.1
1980	0.6	0.8	0.8	0.6	0.9	0.9	2.0	3.1	2.7	2.8	4.1	3.8
1981	0.6	0.8	0.8	0.6	0.9	0.9	2.0	2.9	2.7	2.6	3.8	3.6
1982	0.6	0.8	0.8	0.6	0.9	0.9	2.0	3.0	2.7	2.7	4.0	3.7
1983	0.6	0.8	0.8	0.6	0.9	0.9	2.0	2.9	2.7	2.8	4.0	3.9
1984	0.6	0.8	0.8	0.6	0.9	0.9	1.9	2.9	2.6	2.7	4.0	3.7
1985	0.6	0.8	0.8	0.6	0.9	0.9	1.9	2.9	2.6	2.7	4.0	3.7
1986	0.6	0.8	0.8	0.6	0.9	0.9	1.9	2.7	2.6	2.6	3.8	3.7
1987	0.6	0.8	0.8	0.6	0.9	0.9	1.9	2.7	2.6	2.6	3.7	3.6
1988	0.6	0.8	0.8	0.6	0.9	0.9	1.9	2.8	2.5	2.4	3.4	3.5
1989	0.6	0.9	0.9	0.7	1.0	1.0	2.0	3.1	2.7	2.9	4.1	4.2
1990	0.6	0.9	0.9	0.7	1.0	1.0	2.0	3.0	2.8	2.9	4.1	4.2
1991	0.6	0.9	0.9	0.7	1.0	1.0	2.0	2.9	2.8	3.0	4.2	4.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 22-6 Standard errors for estimated percentages in table 22-3

Year	All			White			Black			Hispanic		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971	0.6	0.9	0.7	0.6	0.9	0.8	1.7	2.6	2.2	2.1	3.6	2.2
1972	0.8	1.2	1.1	0.9	1.3	1.2	2.3	3.4	3.2	2.7	4.2	3.3
1973	0.8	1.2	1.1	0.9	1.3	1.2	2.3	3.2	3.2	2.6	4.0	3.4
1974	0.9	1.3	1.1	0.9	1.4	1.3	2.2	3.3	2.9	2.5	3.5	3.7
1975	0.8	1.2	1.1	0.9	1.3	1.2	2.3	3.6	3.0	2.9	4.5	3.7
1976	0.8	1.2	1.1	0.9	1.3	1.2	2.3	3.5	3.2	2.6	4.3	3.0
1977	0.8	1.2	1.2	0.9	1.4	1.3	2.4	3.4	3.3	2.7	3.9	3.8
1978	0.8	1.2	1.1	0.9	1.4	1.3	2.2	3.1	3.1	2.9	4.0	4.1
1979	0.8	1.2	1.1	0.9	1.3	1.2	2.2	3.3	2.9	2.6	4.0	3.3
1980	0.8	1.2	1.1	0.9	1.3	1.2	2.0	3.1	2.7	2.4	3.6	3.1
1981	0.8	1.2	1.1	0.9	1.3	1.2	2.1	3.1	2.8	2.3	3.5	3.1
1982	0.9	1.3	1.2	1.0	1.4	1.4	2.3	3.3	3.1	2.9	4.4	3.7
1983	0.9	1.3	1.2	1.0	1.5	1.4	2.2	3.3	3.0	3.0	4.1	4.3
1984	0.9	1.3	1.2	1.0	1.4	1.4	2.2	3.4	2.8	3.0	4.2	4.1
1985	0.9	1.3	1.2	1.0	1.5	1.4	2.2	3.1	3.0	3.0	4.4	4.1
1986	0.9	1.3	1.2	1.0	1.5	1.4	2.1	2.8	3.0	2.8	4.0	3.9
1987	0.9	1.3	1.2	1.0	1.5	1.4	2.0	2.9	2.8	2.6	3.9	3.6
1988	0.9	1.3	1.2	1.0	1.5	1.4	2.1	3.2	2.7	2.7	3.9	3.7
1989	1.0	1.4	1.4	1.2	1.7	1.6	2.4	3.6	3.2	3.1	4.3	4.5
1990	1.0	1.4	1.4	1.1	1.6	1.6	2.4	3.7	3.1	2.9	4.0	4.3
1991	0.9	1.3	1.3	1.1	1.6	1.6	2.1	3.1	2.8	3.0	4.0	4.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 23-1 Percentage of population who have completed secondary school and higher education, by age, sex, and country: 1989

Country	Both sexes		Male		Female	
	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
			25–64 years old			
Larger countries						
United States	82.0	23.4	81.9	26.6	82.1	20.5
Japan	69.7	13.3	70.9	21.5	68.5	5.2
Germany	78.4	10.2	87.7	13.4	69.0	7.0
United Kingdom	64.5	9.2	69.6	11.6	58.8	6.6
France	48.1	7.0	52.5	8.6	43.7	5.4
Italy	25.7	5.7	28.0	6.7	23.5	4.7
Canada	71.4	15.1	70.6	17.2	72.2	13.0
Other countries						
Australia	55.3	9.9	63.0	12.3	47.6	7.6
Austria	65.3	6.4	76.0	7.4	54.9	5.3
Belgium	37.3	7.3	40.0	10.2	34.6	4.4
Denmark	57.2	10.5	62.2	13.0	52.0	8.0
Finland	57.6	9.7	57.9	11.9	57.3	7.4
Ireland	38.0	7.3	35.1	8.9	41.0	5.8
Netherlands	54.8	5.9	61.3	8.3	48.0	3.3
New Zealand	56.6	9.4	62.6	11.5	50.7	7.5
Norway	64.3	11.3	67.5	12.7	61.1	9.9
Portugal	7.8	4.0	7.5	4.7	8.1	3.3
Spain	19.8	9.3	22.8	10.3	16.9	8.3
Sweden	67.2	12.5	66.4	13.2	67.9	11.8
Switzerland	78.8	10.0	84.8	13.7	72.7	6.2
			25–34 years old			
Larger countries						
United States	86.6	24.2	85.7	24.9	87.4	23.5
Japan	90.6	22.9	89.3	34.2	91.8	11.5
Germany	91.5	11.8	94.5	13.3	88.2	10.3
United Kinddom	76.7	11.2	79.7	12.8	73.7	9.5
France	63.0	7.6	65.6	8.1	60.4	7.1
Italy	41.1	6.7	40.9	6.9	41.2	6.5
Canada	83.5	16.1	82.1	16.9	84.8	15.2
Other countries						
Australia	62.1	12.2	67.1	13.6	57.2	10.7
Austria	77.4	8.2	84.4	7.1	70.3	9.2
Belgium	51.3	9.7	50.3	12.2	52.3	7.1
Denmark	67.9	10.4	69.8	12.1	65.8	8.7
Finland	80.2	11.0	78.1	12.8	82.4	9.1
Ireland	51.9	8.8	47.5	9.5	56.4	8.2
Netherlands	65.3	6.9	66.2	8.8	64.3	5.0
New Zealand	60.3	10.2	64.7	11.7	56.2	8.7
Norway	64.3	11.3	67.5	12.7	61.1	9.9
Portugal	12.6	5.9	11.0	5.9	14.2	6.0
Spain	19.8	9.3	22.8	10.3	16.9	8.3
Sweden	82.5	11.5	80.3	12.0	84.9	11.2
Switzerland	88.4	11.6	90.5	14.8	86.4	8.6

Table 23-1 Percentage of population who have completed secondary school and higher education, by age, sex, and country: 1989-Continued

Country	Both sexes		Male		Female	
	Secondary education	Higher education	Secondary education	Higher education	Secondary education	Higher education
			35–44 years old			
Larger countries						
United States	86.6	27.9	86.8	31.8	86.5	24.1
Japan	77.0	14.5	77.0	23.6	77.0	5.4
Germany	83.4	14.2	90.5	18.4	76.1	9.9
United Kingdom	67.1	10.7	73.7	14.2	60.6	7.2
France	54.3	8.9	59.2	10.5	49.4	7.2
Italy	30.6	8.0	33.6	9.0	27.6	7.0
Canada	77.9	18.6	77.5	21.0	78.3	16.2
Other countries						
Australia	58.9	12.1	67.1	15.0	50.5	9.1
Austria	69.3	7.7	78.8	9.2	59.7	6.1
Belgium	42.7	8.6	45.4	11.9	40.0	5.2
Denmark	62.1	13.4	66.1	15.6	57.9	11.1
Finland	63.8	12.1	63.4	14.2	64.2	9.6
Ireland	38.3	8.3	35.5	10.3	41.1	6.2
Netherlands	57.7	7.3	64.7	10.4	50.3	4.0
New Zealand	58.8	11.0	65.2	13.7	52.6	8.5
Norway	—	—	—	—	—	—
Portugal	9.6	4.7	9.5	5.6	9.6	3.9
Spain	—	—	—	—	—	—
Sweden	74.8	16.7	73.2	17.0	76.5	16.3
Switzerland	81.0	11.5	87.1	15.5	74.8	7.5
			45–54 years old			
Larger countries						
United States	78.4	22.0	78.5	26.2	78.3	18.1
Japan	59.6	9.1	62.4	15.8	56.9	2.5
Germany	73.0	8.7	83.6	12.4	61.9	4.8
United Kingdom	56.2	7.0	65.3	10.3	47.1	3.8
France	41.6	6.5	47.5	8.6	35.7	4.3
Italy	17.4	4.4	20.8	5.8	14.1	3.0
Canada	61.5	14.0	60.8	17.3	62.2	10.8
Other countries						
Australia	50.9	7.7	60.4	10.6	41.0	4.8
Austria	60.5	5.1	72.5	7.5	48.6	2.7
Belgium	30.8	6.1	35.5	9.1	26.2	3.1
Denmark	52.3	10.0	59.0	13.0	45.5	6.9
Finland	45.6	9.1	47.0	11.6	43.9	6.3
Ireland	26.7	5.4	24.9	7.3	28.5	3.6
Netherlands	48.5	4.8	57.5	7.4	39.1	2.2
New Zealand	51.7	7.6	58.8	9.6	44.6	5.6
Norway	—	—	—	—	—	—
Portugal	6.1	3.0	6.4	4.2	5.8	1.9
Spain	—	—	—	—	—	—
Sweden	59.2	11.8	58.5	12.8	60.0	10.8
Switzerland	74.5	8.9	82.6	12.7	65.8	4.8

— Not available.

NOTE: In the United States completing (upper) secondary school is defined as completing high school; completing higher education is defined as completing 4 or more years of college.

SOURCE: Organization for Economic Cooperation and Development, Center for Education Research and Innocation, International Indicators Project.

Table 24-1 Number of degrees conferred, by race/ethnicity and degree level: Selected academic years ending 1977–1990

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990
				Men			
Associate's degrees							
White	178,236	156,671	151,242	157,278	158,126	150,950	154,301
Black	15,330	14,425	14,290	14,192	13,956	12,913	13,171
Hispanic	9,105	8,135	8,327	8,561	8,764	9,212	9,810
Asian or Pacific Islander	3,630	4,058	4,557	5,492	6,172	6,375	6,470
American Indian/Alaskan Native	1,216	1,069	1,108	1,198	1,263	1,325	1,436
Bachelor's degrees							
White	435,659	415,301	406,173	405,085	406,751	407,142	413,469
Black	25,026	24,544	24,511	23,018	22,499	22,363	23,276
Hispanic	10,238	10,354	10,810	12,402	12,864	13,947	14,871
Asian or Pacific Islander	7,590	8,190	10,107	13,554	17,249	19,271	19,617
American Indian/Alaskan Native	1,797	1,730	1,700	1,998	1,819	1,731	1,828
Advanced degrees*							
White	206,097	190,300	180,501	163,706	161,535	163,648	165,987
Black	10,296	9,561	8,624	7,384	7,474	7,283	7,675
Hispanic	4,542	4,058	4,493	4,729	5,072	5,052	5,437
Asian or Pacific Islander	4,432	4,830	5,419	6,796	7,453	8,815	8,946
American Indian/Alaskan Native	747	714	730	823	758	674	655
Master's degrees							
White	138,303	123,754	115,562	106,059	105,573	109,709	112,976
Black	7,769	7,045	6,158	5,200	5,151	5,175	5,492
Hispanic	3,266	2,775	3,085	3,059	3,330	3,328	3,566
Asian or Pacific Islander	3,116	3,324	3,773	4,842	5,238	6,050	6,070
American Indian/Alaskan Native	521	495	501	583	517	476	465
Doctor's degrees							
White	20,017	18,423	17,310	15,017	14,813	14,540	15,102
Black	766	733	694	561	488	490	533
Hispanic	383	294	277	431	439	350	417
Asian or Pacific Islander	540	646	655	802	795	946	910
American Indian/Alaskan Native	67	69	95	64	58	50	52
First-professional degrees							
White	47,777	48,123	47,629	42,630	41,149	39,399	37,909
Black	1,761	1,783	1,772	1,623	1,835	1,618	1,650
Hispanic	893	989	1,131	1,239	1,303	1,374	1,454
Asian or Pacific Islander	776	860	991	1,152	1,420	1,819	1,966
American Indian/Alaskan Native	159	150	134	176	183	148	138

Table 24-1 Number of degrees conferred, by race/ethnicity and degree level: Selected academic years ending 1977–1990 - Continued

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990
Women							
Associate's degrees							
White	164,054	174,421	187,925	198,065	203,693	203,863	214,228
Black	17,829	20,554	21,040	21,607	21,510	21,809	22,107
Hispanic	7,531	8,134	9,473	10,846	10,581	11,169	12,252
Asian or Pacific Islander	3,414	3,460	4,093	4,422	5,622	6,156	6,956
American Indian/Alaskan Native	1,282	1,267	1,476	1,755	1,933	2,010	2,089
Bachelor's degrees							
White	369,527	384,316	401,146	421,021	435,069	452,557	469,527
Black	33,489	35,586	36,162	34,455	34,056	35,702	37,798
Hispanic	8,425	9,675	11,022	13,472	14,126	15,963	17,815
Asian or Pacific Islander	6,155	7,146	8,687	11,841	15,369	18,415	19,442
American Indian/Alaskan Native	1,522	1,674	1,893	2,248	2,152	2,223	2,510
Advanced degrees*							
White	144,308	147,309	151,174	147,075	154,458	165,204	171,615
Black	14,518	13,935	12,705	10,738	10,873	11,026	12,190
Hispanic	3,125	3,208	3,965	4,696	4,773	5,127	5,678
Asian or Pacific Islander	2,362	2,681	3,196	3,908	4,472	5,821	6,318
American Indian/Alaskan Native	511	605	626	800	754	761	812
Master's degrees							
White	126,844	125,297	125,654	117,569	123,297	133,047	138,542
Black	13,255	12,348	10,975	8,739	8,716	8,921	9,839
Hispanic	2,803	2,769	3,376	3,805	3,714	3,954	4,339
Asian or Pacific Islander	1,999	2,171	2,509	2,940	3,320	4,286	4,576
American Indian/Alaskan Native	446	504	533	673	587	610	643
Doctor's degrees							
White	6,819	7,705	8,598	8,917	9,622	10,342	10,691
Black	487	534	571	593	572	575	612
Hispanic	139	145	179	246	311	278	366
Asian or Pacific Islander	118	165	222	304	302	378	372
American Indian/Alaskan Native	28	35	35	55	46	35	50
First-professional degrees							
White	10,645	14,307	16,922	20,589	21,539	21,815	22,382
Black	776	1,053	1,159	1,406	1,585	1,530	1,739
Hispanic	183	294	410	645	748	895	973
Asian or Pacific Islander	245	345	465	664	850	1,157	1,370
American Indian/Alaskan Native	37	66	58	72	121	116	119

*Advanced degrees refer to master's, doctor's, and first-professional degrees.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 245, 247, and 249 (for 1977-1987 data) and *Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90*, tables 3-7 (for 1989 and 1990 data) (based on IPEDS/HEGIS surveys of degrees conferred).

Table 24-2 Index of number of degrees conferred, by sex, degree level, and race/ethnicity: Selected academic years ending 1977–1990

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990
Men							
Associate's degrees							
White	117.8	103.6	100.0	104.0	104.6	99.8	102.0
Black	107.3	100.9	100.0	99.3	97.7	90.4	92.2
Hispanic	109.3	97.7	100.0	102.8	105.2	110.6	117.8
Asian or Pacific Islander	79.7	89.0	100.0	120.5	135.4	139.9	142.0
American Indian/Alaskan Native	109.7	96.5	100.0	108.1	114.0	119.6	129.6
Bachelor's degrees							
White	107.3	102.2	100.0	99.7	100.1	100.2	101.8
Black	102.1	100.1	100.0	93.9	91.8	91.2	95.0
Hispanic	94.7	95.8	100.0	114.7	119.0	129.0	137.6
Asian or Pacific Islander	75.1	81.0	100.0	134.1	170.7	190.7	194.1
American Indian/Alaskan Native	105.7	101.8	100.0	117.5	107.0	101.8	107.5
Advanced degrees*							
White	114.2	105.4	100.0	90.7	89.5	90.7	92.0
Black	119.4	110.9	100.0	85.6	86.7	84.5	89.0
Hispanic	101.1	90.3	100.0	105.3	112.9	112.4	121.0
Asian or Pacific Islander	81.8	89.1	100.0	125.4	137.5	162.7	165.1
American Indian/Alaskan Native	102.3	97.8	100.0	112.7	103.8	92.3	89.7
Master's degrees							
White	119.7	107.1	100.0	91.8	91.4	94.9	97.8
Black	126.2	114.4	100.0	84.4	83.6	84.0	89.2
Hispanic	105.9	90.0	100.0	99.2	107.9	107.9	115.6
Asian or Pacific Islander	82.6	88.1	100.0	128.3	138.8	160.3	160.9
American Indian/Alaskan Native	104.0	98.8	100.0	116.4	103.2	95.0	92.8
Doctor's degrees							
White	115.6	106.4	100.0	86.8	85.6	84.0	87.2
Black	110.4	105.6	100.0	80.8	70.3	70.6	76.8
Hispanic	138.3	106.1	100.0	155.6	158.5	126.4	150.5
Asian or Pacific Islander	82.4	98.6	100.0	122.4	121.4	144.4	138.9
American Indian/Alaskan Native	70.5	72.6	100.0	67.4	61.1	52.6	54.7
First-professional degrees							
White	100.3	101.0	100.0	89.5	86.4	82.7	79.6
Black	99.4	100.6	100.0	91.6	103.6	91.3	93.1
Hispanic	79.0	87.4	100.0	109.5	115.2	121.5	128.6
Asian or Pacific Islander	78.3	86.8	100.0	116.2	143.3	183.6	198.4
American Indian/Alaskan Native	118.7	111.9	100.0	131.3	136.6	110.4	103.0

Table 24-2 Index of number of degrees conferred, by sex, degree level, and race/ethnicity: Selected academic years ending 1977–1990 - Continued

Sex, degree level, and race/ethnicity	1977	1979	1981	1985	1987	1989	1990
Women							
Associate's degrees							
White	87.3	92.8	100.0	105.4	108.4	108.5	114.0
Black	84.7	97.7	100.0	102.7	102.2	103.7	105.1
Hispanic	79.5	85.9	100.0	114.5	111.7	117.9	129.3
Asian or Pacific Islander	83.4	84.5	100.0	108.0	137.4	150.4	169.9
American Indian/Alaskan Native	86.9	85.8	100.0	118.9	131.0	136.2	141.5
Bachelor's degrees							
White	92.1	95.8	100.0	105.0	108.5	112.8	117.0
Black	92.6	98.4	100.0	95.3	94.2	98.7	104.5
Hispanic	76.4	87.8	100.0	122.2	128.2	144.8	161.6
Asian or Pacific Islander	70.9	82.3	100.0	136.3	176.9	212.0	223.8
American Indian/Alaskan Native	80.4	88.4	100.0	118.8	113.7	117.4	132.6
Advanced degrees*							
White	95.5	97.4	100.0	97.3	102.2	109.3	113.5
Black	114.3	109.7	100.0	84.5	85.6	86.8	95.9
Hispanic	78.8	80.9	100.0	118.4	120.4	129.3	143.2
Asian or Pacific Islander	73.9	83.9	100.0	122.3	139.9	182.1	197.7
American Indian/Alaskan Native	81.6	96.6	100.0	127.8	120.4	121.6	129.7
Master's degrees							
White	100.9	99.7	100.0	93.6	98.1	105.9	110.3
Black	120.8	112.5	100.0	79.6	79.4	81.3	89.6
Hispanic	83.0	82.0	100.0	112.7	110.0	117.1	128.5
Asian or Pacific Islander	79.7	86.5	100.0	117.2	132.3	170.8	182.4
American Indian/Alaskan Native	83.7	94.6	100.0	126.3	110.1	114.4	120.6
Doctor's degrees							
White	79.3	89.6	100.0	103.7	111.9	120.3	124.3
Black	85.3	93.5	100.0	103.9	100.2	100.7	107.2
Hispanic	77.7	81.0	100.0	137.4	173.7	155.3	204.5
Asian or Pacific Islander	53.2	74.3	100.0	136.9	136.0	170.3	167.6
American Indian/Alaskan Native	80.0	100.0	100.0	157.1	131.4	100.0	142.9
First-professional degrees							
White	62.9	84.5	100.0	121.7	127.3	128.9	132.3
Black	67.0	90.9	100.0	121.3	136.8	132.0	150.0
Hispanic	44.6	71.7	100.0	157.3	182.4	218.3	237.3
Asian or Pacific Islander	52.7	74.2	100.0	142.8	182.8	248.8	294.6
American Indian/Alaskan Native	63.8	113.8	100.0	124.1	208.6	200.0	205.2

*Advanced degrees refer to master's, doctor's, and first-professional degrees.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 245, 247, and 249 (for 1977-1987 data) and *Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90*, tables 3-7 (for 1989 and 1990 data) (based on IPEDS/HEGIS surveys of degrees conferred).

Table 24-3 Number and index of number of high school graduates: 1974–1989

Year	Number			Index of number (1981=100)		
	White	Black	Hispanic	White	Black	Hispanic
1974	2,637,053	317,139	123,963	105.2	88.1	82.8
1975	2,604,461	305,871	135,106	103.9	84.9	90.3
1976	2,603,817	305,618	146,559	103.9	84.9	97.9
1977	2,575,249	319,868	147,242	102.8	88.8	98.4
1978	2,620,838	329,308	148,326	104.6	91.4	99.1
1979	2,599,492	337,599	139,871	103.7	93.7	93.5
1980	2,557,883	339,187	143,812	102.1	94.2	96.1
1981	2,506,098	360,163	149,641	100.0	100.0	100.0
1982	2,442,485	373,510	152,223	97.5	103.7	101.7
1983	2,389,444	401,395	165,702	95.3	111.4	110.7
1984	2,266,215	384,730	155,087	90.4	106.8	103.6
1985	2,193,831	380,937	165,491	87.5	105.8	110.6
1986	2,096,710	347,734	161,784	83.7	96.5	108.1
1987	2,066,293	363,323	174,396	82.5	100.9	116.5
1988	1,980,471	347,805	174,134	79.0	96.6	116.4
1989	1,906,960	346,837	155,762	76.1	96.3	104.1

NOTE: The number of high school graduates reported here is a 3-year moving average. It differs from that reported in *Indicator 36* because of differences in definition and in surveys used.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 24-4 Standard errors for index of number of high school graduates in text table for *Indicator 24*

Academic year ending	White	Black	Hispanic
1977	4.0	11.7	18.3
1979	4.1	11.6	18.3
1981	3.9	12.4	17.6
1985	3.6	12.2	22.0
1987	3.5	12.3	25.4
1989	3.5	12.8	27.6

Table 24-5 Standard errors for estimates of numbers and indices in table 24-3

Year	Number			Index of number (1981=100)		
	White	Black	Hispanic	White	Black	Hispanic
1974	69,468	29,193	16,277	4.0	11.7	15.1
1975	70,389	28,196	17,011	4.1	11.0	16.2
1976	67,965	27,686	18,168	3.9	10.7	17.9
1977	70,253	29,501	18,684	4.0	11.7	18.3
1978	70,218	30,326	17,449	4.0	12.2	16.5
1979	70,378	29,247	18,686	4.1	11.6	18.3
1980	69,499	30,522	17,155	4.0	12.4	16.1
1981	68,734	30,518	18,167	3.9	12.4	17.6
1982	72,468	33,598	20,712	4.0	13.5	20.4
1983	71,027	33,916	18,584	3.9	13.7	17.2
1984	70,599	35,578	21,491	3.8	14.9	21.6
1985	67,439	31,502	27,079	3.6	12.2	22.0
1986	68,045	33,462	29,515	3.6	13.5	24.7
1987	66,509	31,585	30,076	3.5	12.3	25.4
1988	71,854	36,379	35,676	3.6	14.1	28.7
1989	69,815	34,244	34,647	3.5	12.8	27.6

NOTE: The number of high school graduates reported here is a 3-year moving average. It differs from that reported in *Indicator 36* because of differences in definition and in surveys used.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 25-1 Average Carnegie units completed by high school graduates, by curriculum track, and by sex and race/ethnicity: 1969, 1982, and 1987

Characteristic	Total Carnegie units			Total academic units			Total vocational units			Total personal use units		
	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	20.5	21.3	22.8	14.9	14.1	15.6	3.7	4.6	4.4	1.9	2.6	2.7
Sex												
Male	20.2	21.2	22.7	14.9	13.9	15.3	3.4	4.6	4.5	1.9	2.7	2.8
Female	20.7	21.5	22.9	14.9	14.3	16.0	3.9	4.6	4.4	1.9	2.5	2.6
Race/ethnicity												
White	20.3	21.4	22.9	15.2	14.4	15.7	3.4	4.5	4.5	1.7	2.5	2.6
Black	20.7	21.0	22.1	13.5	13.6	15.0	4.8	4.8	4.5	2.4	2.6	2.7
Hispanic	21.8	21.1	22.5	13.4	12.9	15.1	5.1	5.3	4.3	3.2	2.9	3.2
Asian	22.9	22.1	23.9	15.6	15.8	17.8	3.8	3.1	2.9	3.5	3.1	3.2
American Indian	—	21.3	23.2	—	13.3	15.3	—	5.1	4.7	—	2.9	3.2

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

NOTE: In this indicator Carnegie units are divided among 3 curricular areas: Academic, vocational, and personal use. Within each area, courses are assigned as follows: 1) *Academic*: Mathematics (basic, general, applied, pre-algebra, algebra I, geometry, advanced/other, advanced calculus); Science (survey, biology, chemistry, physics); English (survey, literature, composition, speech); Social Studies (American history, World history, American government, humanities/other); Fine Arts (fine arts and crafts, music, drama/dance); Foreign Languages (survey, English for speakers of other languages, years 1-4 by language); 2) *Vocational*: Consumer and Homemaking Education; General Labor Market Preparation (typewriting 1, introductory industrial arts, work experience/career exploration, general labor market skills); Specific Labor Market Preparation (agriculture/renewable resources, business, marketing and distribution, health occupations, occupational home economics, trade and industry, technical and communications); 3) *Personal Use*: General skills; Health (physical education); Religion; Military Science.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study; National Assessment of Vocational Education Statistics, The Secondary School Taxonomy, 1989.

Table 25-2 Average vocational Carnegie units by category completed by high school graduates, by vocational education category, and by sex and race/ethnicity: 1969, 1982, and 1987

Characteristic	Total			Career and home-maker education			General labor market preparation			Specific labor market preparation		
	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	3.7	4.6	4.4	0.5	0.7	0.6	1.1	1.0	0.9	2.1	2.9	2.9
Sex												
Male	3.4	4.6	4.5	0.1	0.3	0.3	0.9	1.0	0.9	2.4	3.4	3.3
Female	3.9	4.6	4.4	0.9	1.0	0.9	1.2	1.1	1.0	1.8	2.6	2.6
Race/ethnicity												
White	3.4	4.5	4.5	0.4	0.6	0.6	1.0	1.0	0.9	2.0	2.9	3.0
Black	4.8	4.8	4.5	0.7	0.9	0.7	1.6	1.0	1.0	2.5	2.9	2.8
Hispanic	5.1	5.3	4.3	0.4	0.9	0.6	1.9	1.2	1.0	2.8	3.2	2.7
Asian	3.8	3.1	2.9	0.2	0.3	0.3	1.6	0.9	0.7	2.0	1.9	1.9
American Indian	—	5.1	4.7	—	0.5	0.6	—	1.1	0.9	—	3.5	3.2

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 25-3 Vocational education Carnegie units as a percentage of total vocational education units, by sex and race/ethnicity: 1969, 1982, and 1987

Characteristic	Career and homemaker education			General labor market preparation			Specific labor market preparation		
	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	12.6	15.1	14.1	37.5	27.6	26.0	49.8	57.3	59.9
Sex									
Male	2.1	7.6	8.1	35.3	25.9	24.3	62.6	66.5	67.6
Female	22.3	22.1	19.8	39.1	29.1	27.5	38.6	48.8	52.6
Race/ethnicity									
White	12.9	14.1	13.7	38.1	28.1	26.3	49.0	57.8	60.0
Black	13.3	20.5	17.3	34.3	25.8	25.8	52.5	53.7	56.9
Hispanic	9.0	17.2	15.2	38.4	25.6	26.3	52.6	57.2	58.5
Asian	5.7	9.4	11.3	43.4	36.4	28.0	50.9	54.2	60.7
American Indian	—	11.7	14.3	—	25.5	22.8	—	62.8	62.9

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

Note: See note in table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 25-4 Standard errors for estimated numbers and percentage in text table for *Indicator 25*

Characteristic	Total number of Carnegie units			Curriculum track unit as a *percentage* of totl Carnegie units								
				Academic			Vocational			Personal use		
	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	0.23	0.06	0.09	0.24	0.27	0.37	0.23	0.25	0.31	0.09	0.15	0.27
Sex												
Male	0.23	0.07	0.09	0.26	0.32	0.43	0.23	0.31	0.35	0.10	0.19	0.29
Female	0.21	0.07	0.09	0.26	0.32	0.39	0.24	0.31	0.35	0.09	0.16	0.27
Race/ethnicity												
White	0.23	0.07	0.10	0.20	0.31	0.49	0.19	0.29	0.38	0.07	0.17	0.31
Black	0.54	0.16	0.15	0.38	0.70	0.52	0.35	0.64	0.48	0.16	0.37	0.45
Hispanic	0.25	0.11	0.14	1.19	0.46	0.67	1.16	0.47	0.71	0.47	0.28	0.41
Asian	0.23	0.17	0.63	0.88	0.95	0.80	0.84	0.83	1.29	0.36	0.54	0.84
American Indian	—	0.29	0.54	—	1.02	0.78	—	1.15	0.61	—	0.57	0.58

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

Note: See note in table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 25-5 Standard errors for estimated numbers in table 25-1

Characteristic	Total Carnegie units			Total academic units			Total vocational units			Total personal use units		
	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	0.23	0.06	0.09	0.28	0.07	0.11	0.29	0.06	0.07	0.02	0.15	0.07
Sex												
Male	0.23	0.07	0.09	0.29	0.08	0.12	0.39	0.07	0.08	0.02	0.04	0.07
Female	0.21	0.07	0.09	0.29	0.08	0.11	0.29	0.07	0.08	0.02	0.04	0.07
Race/ethnicity												
White	0.23	0.07	0.10	0.28	0.08	0.13	0.29	0.06	0.09	0.14	0.04	0.08
Black	0.54	0.16	0.15	0.18	0.19	0.15	0.31	0.14	0.10	0.15	0.08	0.11
Hispanic	0.25	0.11	0.14	0.34	0.11	0.20	0.60	0.10	0.16	0.12	0.07	0.10
Asian	0.23	0.17	0.63	0.81	0.25	0.62	0.48	0.18	0.26	0.14	0.12	0.29
American Indian	—	0.29	0.54	—	0.26	0.34	—	0.27	0.18	—	0.13	0.18

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

Note: See note in table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 25-6 Standard errors for estimated numbers in table 25-2

Characteristic	Total			Career and home-maker education			General labor market preparation			Specific labor market preparation		
	1969	1982	1987	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	0.29	0.06	0.07	0.06	0.02	0.02	0.04	0.02	0.02	0.28	0.05	0.06
Sex												
Male	0.40	0.07	0.08	0.01	0.01	0.02	0.05	0.03	0.03	0.42	0.07	0.07
Female	0.29	0.07	0.08	0.08	0.03	0.03	0.02	0.02	0.03	0.18	0.05	0.05
Race/ethnicity												
White	0.29	0.06	0.09	0.05	0.02	0.02	0.05	0.02	0.03	0.32	0.06	0.07
Black	0.31	0.14	0.10	0.05	0.05	0.03	0.17	0.05	0.03	0.16	0.15	0.09
Hispanic	0.60	0.10	0.16	0.08	0.04	0.06	0.25	0.05	0.06	0.41	0.10	0.09
Asian	0.48	0.18	0.26	0.05	0.03	0.07	0.23	0.07	0.09	0.22	0.15	0.13
American Indian	—	0.27	0.18	—	0.07	0.06	—	0.09	0.10	—	0.24	0.16

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

Note: See note in table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 25-7 Standard errors for estimated percentages in table 25-3

Characteristic	Total Career and home-maker education			Total General labor market preparation			Total Specific labor market preparation		
	1969	1982	1987	1969	1982	1987	1969	1982	1987
Total	0.26	0.35	0.43	0.51	0.46	0.54	0.50	0.52	0.61
Sex									
Male	0.02	0.34	0.39	0.70	0.62	0.60	0.70	0.68	0.69
Female	0.51	0.50	0.63	0.60	0.54	0.61	0.59	0.63	0.76
Race/ethnicity									
White	0.38	0.39	0.50	0.54	0.52	0.66	0.57	0.60	0.67
Black	0.64	1.11	1.09	0.87	1.14	0.95	0.97	1.49	1.28
Hispanic	2.27	0.77	1.10	3.27	0.94	1.27	3.65	1.06	1.31
Asian	1.20	1.16	1.84	2.52	2.69	2.62	2.67	2.82	4.06
American Indian	—	1.96	1.18	—	1.80	2.43	—	2.60	2.43

— The 1969 Study of Academic Growth and Prediction did not include a category for American Indians.

Note: See note in table 25-1.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1969 Study of Academic Growth and Prediction; High School and Beyond, base year study; 1987 High School Transcript Study.

Table 26-1 Race-sex field concentration ratio, by race/ethnicity and sex, degree level and field of study: Academic year ending 1990

	Men				Women				
	Black	Hispanic	Asian	American Indian	White	Black	Hispanic	Asian	American Indian
Bachelor's degrees									
Humanities and social/ behavioral sciences	1.00	1.09	0.77	1.10	1.12	0.98	1.30	1.10	1.15
Humanities	0.98	1.08	0.71	1.14	1.33	0.93	1.50	1.20	1.38
Social and behavioral sciences	1.01	1.10	0.81	1.06	0.95	1.02	1.15	1.03	0.97
Natural sciences	0.77	1.00	1.87	1.11	0.70	0.75	0.67	1.70	0.55
Life sciences	0.80	1.25	2.29	1.13	0.87	1.00	0.97	2.45	0.65
Physical sciences	0.57	0.67	1.35	1.26	0.37	0.42	0.30	0.79	0.36
Mathematics	0.97	0.90	1.65	0.85	0.78	0.66	0.53	1.30	0.59
Computer science and engineering	0.89	1.10	2.12	0.79	0.17	0.33	0.23	0.65	0.14
Computer and information sciences	1.36	1.05	2.01	0.87	0.31	0.93	0.50	1.24	0.35
Engineering	0.77	1.11	2.15	0.77	0.13	0.17	0.16	0.49	0.09
Technical/professional fields	1.08	0.91	0.60	1.00	1.28	1.30	1.14	0.95	1.29
Education	1.03	0.87	0.27	1.74	3.22	1.71	2.51	0.69	3.55
Business and management	0.98	0.87	0.67	0.78	0.74	0.90	0.73	0.87	0.63
Other technical/ professional	1.30	0.99	0.56	1.18	1.69	1.98	1.48	1.20	1.84
Master's degrees									
Humanities and social/ behavioral sciences	0.86	1.12	0.64	1.20	0.97	0.64	1.15	0.97	1.10
Humanities	0.75	1.11	0.63	1.09	0.97	0.45	1.11	0.98	0.87
Social and behavioral sciences	1.03	1.14	0.67	1.36	0.99	0.93	1.20	0.96	1.45
Natural sciences	0.55	0.74	1.16	0.75	0.53	0.25	0.39	1.34	0.33
Life sciences	0.61	0.87	1.05	1.09	0.86	0.40	0.66	1.87	0.59
Physical sciences	0.49	0.65	1.04	0.54	0.29	0.12	0.25	0.91	0.20
Mathematics	0.59	0.75	1.54	0.72	0.57	0.30	0.29	1.50	0.26
Computer science and engineering	0.63	0.95	2.74	0.59	0.19	0.15	0.16	1.06	0.12
Computer and information sciences	0.83	0.85	3.26	0.37	0.31	0.30	0.19	2.29	0.09
Engineering	0.56	0.98	2.57	0.66	0.15	0.11	0.15	0.67	0.13
Technical/professional fields	1.15	1.00	0.69	1.06	1.22	1.34	1.20	0.97	1.22
Education	1.39	1.28	0.27	1.49	2.65	2.93	2.76	1.10	3.03
Business and management	0.92	0.82	0.88	0.80	0.42	0.44	0.38	0.67	0.27
Other technical/ professional	1.50	1.18	0.67	1.28	1.74	1.92	1.58	1.59	1.71

Table 26-1 Race-sex field concentration ratio, by race/ethnicity and sex, degree level and field of study: Academic year ending 1990 - Continued

	Men				Women				
	Black	Hispanic	Asian	American Indian	White	Black	Hispanic	Asian	American Indian
Doctor's degrees									
Humanities and social/ behavioral sciences	1.19	1.16	0.61	1.09	1.13	0.82	1.54	0.94	1.00
Humanities	1.07	0.88	0.59	0.99	0.87	0.44	1.41	0.86	0.51
Social and behavioral sciences	1.30	1.43	0.64	1.18	1.39	1.17	1.67	1.02	1.47
Natural sciences	0.32	0.93	1.01	0.63	0.57	0.19	0.49	1.11	0.00
Life sciences	0.40	0.86	0.95	0.68	0.89	0.29	0.74	1.60	0.00
Physical sciences	0.25	1.06	0.98	0.70	0.35	0.12	0.34	0.66	0.00
Mathematics	0.44	0.45	1.55	0.00	0.34	0.15	0.13	1.39	0.00
Computer science and engineering	0.41	0.69	2.54	0.85	0.23	0.10	0.14	0.59	0.00
Computer and information sciences	0.35	0.15	1.94	1.21	0.42	0.10	0.17	0.17	0.00
Engineering	0.42	0.76	2.62	0.80	0.20	0.10	0.14	0.65	0.00
Technical/professional fields	1.75	1.04	0.67	1.34	1.66	2.48	1.31	1.16	2.50
Education	2.22	1.20	0.28	2.06	2.03	3.72	1.57	1.02	2.94
Business and management	0.97	0.58	1.92	1.32	0.72	0.17	0.19	0.65	0.69
Other technical/ professional	1.25	0.92	0.91	0.21	1.36	1.21	1.23	1.53	2.36

NOTE: The race/sex field concentration ratio is calculated as the percentage of people in a race/ethnicity/sex group who majored in a specific field divided by the percentage of white men who majored in the same field. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90," January 1992, (based on IPEDS/HEGIS surveys of degrees conferred).

Table 26-2 Percentage distribution of field of study, by sex, race/ethnicity, and degree level: Academic year ending 1990

Field of study	Men					Women				
	White	Black	Hispanic	Asian	American Indian	White	Black	Hispanic	Asian	American Indian
Bachelor's degrees										
Number	413,469	23,276	14,871	19,617	1,828	469,527	37,798	17,815	19,442	2,510
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/ behavioral sciences	30.0	30.0	32.7	23.0	32.9	33.6	29.4	39.1	33.2	34.5
Humanities	13.3	13.0	14.4	9.5	15.2	17.7	12.3	19.9	16.0	18.3
Social and behavioral sciences	16.8	16.9	18.4	13.5	17.8	16.0	17.1	19.2	17.2	16.2
Natural sciences	7.4	5.7	7.4	13.9	8.3	5.2	5.6	5.0	12.6	4.1
Life sciences	3.6	2.9	4.5	8.2	4.0	3.1	3.6	3.5	8.8	2.4
Physical sciences	2.3	1.3	1.5	3.1	2.9	0.9	1.0	0.7	1.8	0.8
Mathematics	1.5	1.5	1.4	2.6	1.3	1.2	1.0	0.8	2.0	0.9
Computer science and engineering	16.9	15.1	18.5	35.9	13.3	2.9	5.6	3.9	10.9	2.4
Computer and information sciences	3.5	4.8	3.7	7.1	3.1	1.1	3.3	1.8	4.4	1.2
Engineering	13.4	10.3	14.8	28.8	10.3	1.7	2.3	2.2	6.6	1.2
Technical/professional fields	45.6	49.3	41.3	27.3	45.5	58.4	59.4	52.0	43.3	59.0
Education	4.9	5.1	4.3	1.3	8.6	15.9	8.5	12.4	3.4	17.6
Business and management	27.6	27.1	24.1	18.6	21.4	20.3	24.9	20.2	24.1	17.3
Other technical/ professional	13.1	17.0	12.9	7.3	15.4	22.1	26.0	19.4	15.8	24.1
Master's degrees										
Number	112,976	5,492	3,566	6,070	465	138,542	9,839	4,339	4,576	643
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/ behavioral sciences	16.2	13.9	18.2	10.4	19.4	15.8	10.3	18.5	15.7	17.7
Humanities	9.8	7.4	10.9	6.2	10.8	9.5	4.4	10.9	9.6	8.6
Social and behavioral sciences	6.3	6.5	7.3	4.3	8.6	6.3	5.9	7.6	6.1	9.2
Natural sciences	5.1	2.8	3.8	6.0	3.9	2.7	1.3	2.0	6.9	1.7
Life sciences	1.6	1.0	1.4	1.7	1.7	1.4	0.6	1.0	3.0	0.9
Physical sciences	2.4	1.2	1.5	2.5	1.3	0.7	0.3	0.6	2.2	0.5
Mathematics	1.2	0.7	0.9	1.8	0.9	0.7	0.4	0.3	1.8	0.3
Computer science and engineering	14.2	8.9	13.5	39.0	8.4	2.7	2.2	2.3	15.2	1.7
Computer and information sciences	3.5	2.9	2.9	11.3	1.3	1.1	1.0	0.6	8.0	0.3
Engineering	10.8	6.0	10.6	27.7	7.1	1.6	1.2	1.7	7.2	1.4
Technical/professional fields	64.4	74.3	64.5	44.5	68.4	78.9	86.3	77.2	62.2	78.8
Education	15.3	21.3	19.6	4.2	22.8	40.6	44.9	42.3	16.8	46.5
Business and management	35.7	32.9	29.1	31.3	28.4	14.9	15.6	13.6	24.1	9.5
Other technical/ professional	13.4	20.1	15.8	9.0	17.2	23.4	25.8	21.2	21.3	22.9

Table 26-2 Percentage distribution of field of study, by sex, race/ethnicity, and degree level: Academic year ending 1990 -Continued

Field of study	Men					Women				
	White	Black	Hispanic	Asian	American Indian	White	Black	Hispanic	Asian	American Indian
Doctor's degrees										
Number	15,102	533	417	910	52	10,691	612	366	372	50
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	31.9	37.9	36.9	19.6	34.6	36.2	26.0	49.2	30.1	32.0
Humanities	15.6	16.7	13.7	9.1	15.4	13.5	6.9	21.9	13.4	8.0
Social and behavioral sciences	16.3	21.2	23.3	10.4	19.2	22.7	19.1	27.3	16.7	24.0
Natural sciences	27.3	8.8	25.4	27.6	17.3	15.7	5.2	13.4	30.4	0.0
Life sciences	11.4	4.5	9.8	10.8	7.7	10.2	3.3	8.5	18.3	0.0
Physical sciences	13.8	3.4	14.6	13.5	9.6	4.8	1.6	4.6	9.1	0.0
Mathematics	2.1	0.9	1.0	3.3	0.0	0.7	0.3	0.3	3.0	0.0
Computer science and engineering	13.6	5.6	9.4	34.6	11.5	3.1	1.3	1.9	8.1	0.0
Computer and information sciences	1.6	0.6	0.2	3.1	1.9	0.7	0.2	0.3	0.3	0.0
Engineering	12.0	5.1	9.1	31.5	9.6	2.4	1.1	1.6	7.8	0.0
Technical/professional fields	27.2	47.7	28.3	18.2	36.5	45.1	67.5	35.5	31.5	68.0
Education	15.0	33.2	18.0	4.2	30.8	30.3	55.7	23.5	15.3	44.0
Business and management	2.9	2.8	1.7	5.6	3.8	2.1	0.5	0.5	1.9	2.0
Other technical/professional	9.3	11.6	8.6	8.5	1.9	12.7	11.3	11.5	14.2	22.0

NOTE: Detail may not add to total due to rounding. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Race/Ethnicity Trends in Degrees Conferred by Institutions of Higher Education: 1980-81 through 1989-90*, January 1992. (based on IPEDS/HEGIS surveys of degrees conferred).

Table 27-1 Female field concentration ratio at the master's degree level, by field of study: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Humanities	1.58	1.52	1.45	1.34	1.32	1.24	1.17	1.16	1.12	1.08
Social and behavioral sciences	0.65	0.64	0.63	0.62	0.63	0.67	0.69	0.71	0.77	0.81
Natural sciences	0.49	0.49	0.45	0.44	0.42	0.42	0.44	0.43	0.45	0.44
Life sciences	0.76	0.72	0.62	0.58	0.53	0.54	0.57	0.59	0.62	0.60
Physical sciences	0.23	0.24	0.22	0.22	0.21	0.20	0.22	0.22	0.23	0.23
Mathematics	0.62	0.62	0.60	0.59	0.60	0.60	0.61	0.55	0.55	0.58
Computer sciences and engineering	0.03	0.04	0.04	0.05	0.05	0.06	0.07	0.09	0.09	0.11
Computer and information sciences	0.17	0.19	0.17	0.20	0.21	0.20	0.22	0.25	0.24	0.27
Engineering	0.02	0.02	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08
Technical/professional	1.26	1.25	1.26	1.25	1.24	1.23	1.23	1.24	1.22	1.23
Education	1.92	1.97	1.97	1.98	2.03	2.09	2.17	2.25	2.27	2.41
Business and management	0.06	0.06	0.07	0.09	0.11	0.15	0.19	0.22	0.25	0.29
Other technical/professional	1.61	1.55	1.45	1.38	1.30	1.29	1.26	1.31	1.35	1.39

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990*
Humanities	1.03	1.08	1.05	1.08	1.12	1.12	1.05	1.06	1.06	1.05
Social and behavioral sciences	0.84	0.83	0.92	0.97	0.99	1.01	0.99	1.00	1.01	1.01
Natural sciences	0.44	0.46	0.50	0.53	0.53	0.54	0.55	0.55	0.56	0.57
Life sciences	0.63	0.69	0.77	0.82	0.91	0.91	0.91	0.92	0.92	0.94
Physical sciences	0.26	0.27	0.27	0.31	0.30	0.32	0.32	0.31	0.34	0.32
Mathematics	0.51	0.48	0.52	0.54	0.54	0.54	0.61	0.63	0.60	0.60
Computer sciences and engineering	0.12	0.14	0.15	0.18	0.18	0.20	0.20	0.19	0.19	0.19
Computer and information sciences	0.30	0.35	0.39	0.42	0.40	0.42	0.40	0.35	0.36	0.35
Engineering	0.09	0.10	0.10	0.12	0.12	0.13	0.14	0.13	0.14	0.14
Technical/professional	1.24	1.25	1.25	1.25	1.26	1.26	1.28	1.29	1.29	1.28
Education	2.47	2.53	2.64	2.63	2.64	2.66	2.71	2.84	2.84	2.83
Business and management	0.33	0.37	0.40	0.44	0.45	0.45	0.47	0.48	0.47	0.46
Other technical/professional	1.46	1.49	1.58	1.64	1.68	1.68	1.73	1.70	1.71	1.73

*Preliminary.

NOTE: The female field concentration ratio is calculated as the percentage of women earning degrees who majored in a specific field divided by the percentage of men earning degrees who majored in the same field. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 236 and 237 and unpublished tabulations (based on IPEDS/HEGIS surveys of degrees conferred).

Table 27-2 Percentage distribution of masters's degrees, by field of study and sex: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Women										
Number	92,363	102,083	108,903	119,191	130,880	144,523	149,381	150,408	147,709	147,332
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	16.3	15.2	13.9	13.2	12.5	11.2	10.6	10.4	10.0	10.0
Social and behavioral sciences	6.9	6.8	6.5	6.4	6.2	6.0	6.1	6.0	6.0	6.0
Natural sciences	4.6	4.3	3.9	3.7	3.2	2.9	3.1	3.0	3.1	3.0
Life sciences	2.1	2.0	1.8	1.7	1.5	1.4	1.6	1.6	1.7	1.6
Physical sciences	0.9	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.7	0.7
Mathematics	1.6	1.5	1.4	1.3	1.1	0.9	0.9	0.8	0.7	0.7
Computer sciences and engineering	0.4	0.5	0.5	0.5	0.5	0.7	0.8	1.0	1.0	1.3
Computer and information sciences	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5
Engineering	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.8
Technical/professional	71.8	73.1	75.2	76.2	77.6	79.2	79.5	79.6	79.9	79.8
Education	54.1	55.2	56.4	56.6	57.1	57.2	55.9	53.6	52.0	49.5
Business and management	1.1	1.2	1.4	1.8	2.3	3.4	4.5	5.4	6.5	8.3
Other technical/ professional	16.6	16.8	17.4	17.8	18.1	18.7	19.1	20.6	21.3	21.9
Men										
Number	138,146	149,550	154,468	157,842	161,570	167,248	167,783	161,212	153,370	150,749
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	10.3	10.0	9.6	9.8	9.4	9.0	9.0	9.0	8.9	9.3
Social and behavioral sciences	10.5	10.5	10.4	10.3	9.8	9.0	8.7	8.5	7.8	7.4
Natural sciences	9.4	8.8	8.6	8.3	7.7	7.0	6.9	7.0	7.0	6.7
Life sciences	2.8	2.7	2.8	2.9	2.8	2.7	2.8	2.7	2.8	2.7
Physical sciences	4.0	3.6	3.5	3.3	3.1	2.8	2.7	2.9	2.9	2.8
Mathematics	2.7	2.4	2.3	2.1	1.8	1.5	1.4	1.4	1.3	1.2
Computer sciences and engineering	12.8	12.3	11.8	10.8	10.5	10.8	10.6	11.2	11.1	11.9
Computer and information sciences	1.0	1.2	1.2	1.3	1.2	1.3	1.4	1.5	1.6	1.9
Engineering	11.8	11.2	10.6	9.5	9.3	9.4	9.3	9.6	9.5	10.0
Technical/professional	56.9	58.3	59.6	60.8	62.5	64.3	64.7	64.4	65.2	64.7
Education	28.2	28.0	28.6	28.6	28.1	27.4	25.8	23.8	22.9	20.6
Business and management	18.4	19.5	19.1	19.3	20.5	22.5	23.7	24.9	26.5	28.3
Other technical/ professional	10.3	10.9	12.0	12.9	13.9	14.4	15.2	15.7	15.8	15.8
Index of dissimilarity[2]	38.2	38.4	37.6	36.3	36.3	36.2	35.6	36.1	35.7	35.8

Table 27-2 Percentage distribution of masters's degrees, by field of study and sex: Academic years ending 1971–1990 - Continued

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990[1]
Women										
Number	148,696	150,014	145,224	140,668	142,861	145,059	148,194	153,810	161,267	170,201
Total percent ,	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	9.6	9.9	9.5	10.1	10.0	10.0	9.7	9.4	9.4	9.5
Social and behavioral sciences	6.1	6.0	6.4	6.4	6.5	6.5	6.4	6.1	6.3	6.4
Natural sciences	2.9	3.0	3.2	3.3	3.3	3.4	3.5	3.3	3.3	3.2
Life sciences	1.6	1.6	1.7	1.7	1.7	1.7	1.6	1.5	1.5	1.5
Physical sciences	0.7	0.8	0.8	0.9	0.9	1.0	1.0	0.9	0.9	0.8
Mathematics	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.8	0.9
Computer sciences and engineering	1.6	2.0	2.3	2.8	3.0	3.4	3.6	3.5	3.6	3.6
Computer and information sciences	0.7	0.9	1.0	1.3	1.4	1.7	1.7	1.6	1.6	1.6
Engineering	0.9	1.1	1.2	1.5	1.6	1.7	1.9	1.9	2.0	2.0
Technical/professional	79.8	79.1	78.7	77.4	77.1	76.7	76.9	76.3	77.1	76.7
Education	47.5	45.2	42.4	39.5	38.6	38.4	37.7	37.9	38.6	38.3
Business and management	9.8	11.4	13.0	14.3	14.6	14.4	15.0	15.2	15.3	15.4
Other technical/ professional	22.5	22.5	23.2	23.6	23.8	24.0	24.1	23.2	23.2	23.0
Men										
Number	147,043	145,532	144,697	143,595	143,390	143,508	141,363	144,923	149,354	153,643
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	9.3	9.2	9.0	9.3	8.9	8.9	9.2	8.8	8.9	9.0
Social and behavioral sciences	7.3	7.3	7.0	6.6	6.6	6.5	6.5	6.1	6.2	6.3
Natural sciences	6.5	6.6	6.4	6.3	6.3	6.4	6.2	6.1	5.9	5.6
Life sciences	2.5	2.4	2.2	2.1	1.8	1.8	1.8	1.7	1.7	1.5
Physical sciences	2.9	3.0	2.9	3.0	3.1	3.1	3.0	3.0	2.8	2.6
Mathematics	1.2	1.3	1.3	1.2	1.3	1.4	1.4	1.4	1.4	1.4
Computer sciences and engineering	12.6	13.7	14.8	15.9	17.0	17.3	18.3	18.8	18.8	18.5
Computer and information sciences	2.2	2.5	2.6	3.0	3.5	3.9	4.2	4.6	4.5	4.5
Engineering	10.4	11.2	12.1	12.9	13.4	13.4	14.0	14.1	14.3	13.9
Technical/professional	64.2	63.3	62.8	61.8	61.3	61.0	59.8	59.0	59.9	60.1
Education	19.2	17.8	16.1	15.0	14.6	14.4	13.9	13.4	13.6	13.6
Business and management	29.5	30.4	32.1	32.4	32.5	32.3	32.0	31.9	32.7	33.2
Other technical/ professional	15.5	15.0	14.7	14.4	14.1	14.3	13.9	13.7	13.6	13.3
Index of dissimilarity[2]	35.6	35.6	35.4	34.4	34.8	34.8	34.5	34.7	35.3	35.0

[1] Preliminary.

[2] The index of dissimilarity is calculated as: the sum of the absolute differences between the proportions of women and men earning degrees in each of the fields divided by 2. It was calculated here from the 10 most detailed categories shown above. Here, it represents the percentage of one sex who would have to change fields in order for it to have the identical field distribution of the other sex.

NOTE: Detail may not add to totals due to rounding. Totals for 1988-1990 include those for whom field of study is unknown. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 236 and 237 and unpublished tabulations (based on IPEDS/HEGIS surveys of degrees conferred).

Table 27-3 Female field concentration ratio at the doctor's degree level, by field of study: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Humanities	1.89	1.87	1.77	1.71	1.59	1.50	1.41	1.32	1.18	1.10
Social and behavioral sciences	1.25	1.16	1.15	1.21	1.20	1.15	1.20	1.18	1.21	1.22
Natural sciences	0.68	0.66	0.65	0.63	0.62	0.58	0.56	0.57	0.59	0.56
Life sciences	1.17	1.09	1.12	1.08	1.04	0.92	0.84	0.89	0.88	0.83
Physical sciences	0.36	0.38	0.33	0.32	0.33	0.32	0.33	0.31	0.33	0.34
Mathematics	0.51	0.46	0.49	0.46	0.47	0.42	0.47	0.51	0.51	0.38
Computer sciences and engineering	0.04	0.05	0.09	0.08	0.09	0.10	0.11	0.08	0.11	0.11
Computer and information sciences	0.14	0.41	0.38	0.20	0.26	0.35	0.30	0.23	0.37	0.30
Engineering	0.04	0.03	0.07	0.07	0.08	0.08	0.09	0.07	0.09	0.09
Technical/professional	1.29	1.31	1.26	1.25	1.29	1.36	1.36	1.41	1.46	1.53
Education	1.62	1.64	1.52	1.58	1.65	1.69	1.66	1.78	1.87	1.89
Business and management	0.18	0.12	0.27	0.23	0.16	0.19	0.21	0.25	0.34	0.40
Other technical/ professional	0.85	0.86	0.99	0.84	0.90	0.99	1.01	1.00	0.94	1.11

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990*
Humanities	1.15	1.15	1.09	1.08	1.07	1.08	1.08	1.05	1.05	1.06
Social and behavioral sciences	1.19	1.18	1.31	1.30	1.32	1.37	1.35	1.46	1.42	1.49
Natural sciences	0.57	0.57	0.59	0.57	0.60	0.58	0.61	0.63	0.64	0.65
Life sciences	0.87	0.87	0.96	0.98	0.94	0.93	0.99	1.00	1.00	1.06
Physical sciences	0.30	0.34	0.33	0.35	0.37	0.37	0.38	0.41	0.43	0.42
Mathematics	0.41	0.34	0.40	0.44	0.36	0.37	0.39	0.37	0.41	0.40
Computer sciences and engineering	0.11	0.13	0.11	0.12	0.14	0.15	0.15	0.15	0.18	0.18
Computer and information sciences	0.24	0.19	0.30	0.20	0.22	0.28	0.30	0.23	0.32	0.30
Engineering	0.09	0.12	0.09	0.12	0.13	0.13	0.14	0.14	0.17	0.17
Technical/professional	1.55	1.58	1.53	1.56	1.60	1.63	1.69	1.70	1.75	1.72
Education	1.99	2.00	2.03	2.02	2.11	2.11	2.24	2.26	2.35	2.39
Business and management	0.39	0.45	0.41	0.52	0.40	0.51	0.57	0.55	0.65	0.57
Other technical/ professional	1.07	1.15	1.04	1.18	1.21	1.27	1.31	1.39	1.37	1.32

*Preliminary.

NOTE: The female field concentration ratio is calculated as the percentage of women earning degrees who majored in a specific field divided by the percentage of men earning degrees who majored in the same field. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 236 and 237 and unpublished tabulations (based on IPEDS/HEGIS surveys of degrees conferred).

Table 27-4 Percentage distribution of doctor's degrees, by field of study and sex: Academic years ending 1971-1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Women										
Number	4,577	5,273	6,206	6,451	7,266	7,797	8,090	8,473	9,189	9,672
Total percent	100.0	100.0	100.0	100.0	100	100.0	100.0	100.0	100.0	100.0
Humanities	22.8	23.4	24.1	23.5	22.0	21.4	20.0	19.0	18.4	16.2
Social and behavioral sciences	20.4	20.2	20.4	22.2	22.4	22.0	22.6	21.7	21.0	21.1
Natural sciences	20.4	18.7	17.4	16.3	15.9	14.4	14.3	14.6	15.0	14.8
Life sciences	13.0	11.8	11.4	10.8	10.2	9.3	9.0	9.4	9.9	9.8
Physical sciences	5.4	5.2	4.3	3.9	4.1	3.8	3.9	3.7	3.8	4.0
Mathematics	2.0	1.7	1.6	1.6	1.5	1.2	1.3	1.5	1.3	1.0
Computer sciences and engineering	0.6	0.6	1.1	1.0	1.1	1.1	1.1	0.8	1.2	1.3
Computer and information sciences	0.1	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.3
Engineering	0.5	0.4	0.9	0.9	0.9	0.8	0.9	0.7	0.9	1.0
Technical/professional	35.8	37.1	37.0	37.0	38.6	41.1	42.0	43.9	44.4	46.6
Education	29.7	31.5	29.2	30.6	31.6	33.3	34.3	34.9	35.5	36.4
Business and management	0.5	0.4	0.8	0.8	0.6	0.7	0.7	0.8	1.1	1.2
Other technical/ professional	5.7	5.3	6.9	5.6	6.4	7.1	7.0	8.1	7.8	9.0
Men										
Number	27,530	28,090	28,571	27,365	26,817	26,267	25,142	23,658	23,541	22,943
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	12.0	12.5	13.6	13.7	13.8	14.3	14.2	14.4	15.5	14.7
Social and behavioral sciences	16.4	17.4	17.7	18.4	18.7	19.1	18.8	18.3	17.4	17.2
Natural sciences	30.1	28.1	26.7	25.7	25.5	25.0	25.5	25.4	25.5	26.2
Life sciences	11.1	10.8	10.2	10.0	9.8	10.1	10.6	10.6	11.2	11.7
Physical sciences	15.1	13.6	13.1	12.3	12.4	11.9	12.0	11.9	11.7	11.8
Mathematics	4.0	3.7	3.4	3.4	3.2	2.9	2.8	2.9	2.6	2.7
Computer sciences and engineering	13.6	13.5	12.7	12.6	12.1	11.3	10.8	10.8	11.2	11.4
Computer and information sciences	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	0.9
Engineering	13.1	13.0	12.0	11.9	11.3	10.5	10.0	10.1	10.3	10.5
Technical/professional	27.8	28.4	29.3	29.6	29.9	30.3	30.8	31.0	30.5	30.4
Education	18.3	19.2	19.3	19.4	19.2	19.7	20.6	19.6	19.0	19.3
Business and management	2.8	3.1	3.0	3.4	3.6	3.4	3.2	3.4	3.2	3.0
Other technical/ professional	6.7	6.1	7.0	6.7	7.1	7.2	6.9	8.1	8.3	8.2
Index of dissimilarity[2]	28.0	27.0	24.4	25.6	24.7	23.6	23.4	23.3	23.0	23.4

Table 27-4 Percentage distribution of doctor's degrees, by field of study and sex: Academic years ending 1971-1990 - Continued

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990[1]
Women										
Number	10,247	10,483	10,873	11,145	11,243	11,834	12,021	12,247	13,072	13,867
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	15.8	15.7	14.8	14.6	14.1	14.2	13.8	13.0	12.8	13.1
Social and behavioral sciences	20.7	19.9	21.9	21.0	20.8	21.8	21.3	20.9	21.0	21.1
Natural sciences	15.0	15.6	15.2	15.0	15.9	15.6	16.3	17.0	17.0	17.5
Life sciences	10.3	10.4	9.9	9.5	10.0	9.5	10.0	10.4	9.8	10.4
Physical sciences	3.7	4.3	4.2	4.4	4.9	5.0	5.3	5.6	5.9	5.8
Mathematics	1.1	0.9	1.1	1.1	1.0	1.0	1.0	1.0	1.3	1.2
Computer sciences and engineering	1.3	1.5	1.5	1.7	2.1	2.3	2.6	2.8	3.7	3.8
Computer and information sciences	0.2	0.2	0.3	0.2	0.2	0.4	0.4	0.4	0.7	0.6
Engineering	1.0	1.3	1.1	1.5	1.9	1.9	2.2	[illegible]1	3.1	3.1
Technical/professional	47.2	47.3	46.8	47.7	47.2	46.1	46.0	44.5	45.3	43.8
Education	36.5	35.6	34.8	33.8	33.2	32.1	31.5	29.4	29.9	28.8
Business and management	1.2	1.4	1.3	1.8	1.3	1.8	2.2	2.1	2.4	2.0
Other technical/ professional	9.5	10.3	10.7	12.0	12.7	12.3	12.3	13.0	13.0	13.0
Men										
Number	22,711	22,224	21,902	22,064	21,700	21,819	22,099	22,592	22,648	24,371
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities	13.8	13.6	13.5	13.5	13.2	13.2	12.9	12.3	12.2	12.3
Social and behavioral sciences	17.4	16.9	16.7	16.1	15.8	15.9	15.8	14.2	14.8	14.2
Natural sciences	26.6	27.3	25.8	26.1	26.5	26.6	26.5	26.9	26.6	26.7
Life sciences	11.7	11.9	10.3	10.8	10.6	10.2	10.1	10.3	9.9	9.8
Physical sciences	12.2	12.8	12.8	12.8	13.1	13.6	13.7	13.8	13.6	13.8
Mathematics	2.7	2.6	2.7	2.6	2.7	2.8	2.7	2.8	3.1	3.1
Computer sciences and engineering	11.8	12.3	13.4	13.8	15.0	15.9	17.6	18.9	20.3	20.8
Computer and information sciences	1.0	1.0	1.0	1.0	1.0	1.4	1.5	1.7	2.1	2.2
Engineering	10.8	11.2	12.4	12.8	13.9	14.6	16.1	17.3	18.2	18.6
Technical/professional	30.4	29.9	30.5	30.5	29.6	28.4	27.3	26.1	25.9	25.4
Education	18.3	17.8	17.2	16.8	15.8	15.2	14.1	13.0	12.7	12.0
Business and management	3.2	3.2	3.1	3.5	3.3	3.5	3.8	3.8	3.7	3.5
Other technical/ professional	8.9	9.0	10.3	10.2	10.5	9.7	9.4	9.3	9.5	9.9
Index of dissimilarity[2]	24.1	24.2	24.4	24.9	25.5	26.4	26.8	27.5	27.5	28.3

[1] Preliminary.

[2] The index of dissimilarity is calculated as: the sum of the absolute differences between the proportions of women and men majoring in each of the fields divided by 2. It was calculated here from the 10 most detailed categories shown above. Here, it represents the percentage of one sex who would have to change fields in order for it to have the identical field distribution of the other sex.

NOTE: Detail may not add to totals due to rounding. Totals for 1988-1990 include those for whom field of study is unknown. See Glossary for definition of technical/professional fields.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 236 and 237 and unpublished tabulations (based on IPEDS/HEGIS surveys of degrees conferred).

Table 28-1 Index of number of degrees conferred in the natural and computer sciences and engineering (1981=100), by degree level and field of study: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Bachelor's degrees										
All fields	89.8	94.9	98.6	101.1	98.7	99.0	98.3	98.5	98.5	99.4
Total science and engineering	79.8	81.0	84.1	86.8	84.7	85.4	86.7	89.0	92.0	95.7
Natural sciences	104.7	104.5	109.9	116.5	115.9	117.2	115.4	111.3	107.2	103.7
Life sciences	82.7	86.3	97.7	111.9	119.7	125.6	124.0	119.2	113.0	107.3
Physical sciences	89.4	86.6	86.4	88.4	86.7	89.6	93.9	96.0	96.9	97.7
Mathematics	223.9	214.1	208.2	195.3	164.1	144.3	128.1	113.5	106.6	102.7
Computer sciences and engineering	58.2	60.5	61.7	61.1	57.6	57.7	61.8	69.7	78.9	88.8
Computer and information sciences	15.8	22.5	28.5	31.5	33.3	37.4	42.4	47.6	57.7	73.8
Engineering	66.7	68.2	68.4	67.0	62.5	61.8	65.7	74.2	83.2	91.9
Master's degrees										
All fields	77.9	85.1	89.1	93.7	98.9	105.4	107.2	105.4	101.8	100.8
Total science and engineering	101.6	105.1	104.4	101.0	98.8	100.3	101.2	101.2	97.4	99.2
Natural sciences	125.0	127.2	126.9	126.2	120.6	115.0	116.7	113.8	110.8	105.5
Life sciences	95.8	102.1	104.8	109.6	109.6	110.1	119.0	113.9	114.3	108.9
Physical sciences	120.5	119.0	118.4	114.7	109.9	103.4	100.9	105.2	103.2	98.8
Mathematics	202.2	202.5	195.9	188.3	168.6	150.3	143.9	131.4	118.3	111.4
Computer sciences and engineering	86.2	90.5	89.5	84.4	84.3	90.5	91.0	92.9	88.6	95.0
Computer and information sciences	37.6	46.9	50.1	54.0	54.5	61.7	66.3	72.0	72.4	86.5
Engineering	98.4	101.5	99.5	92.0	91.9	97.8	97.2	98.1	92.7	97.2
Doctor's degrees										
All fields	97.4	101.2	105.5	102.6	103.4	103.4	100.8	97.5	99.3	99.0
Total science and engineering	125.0	122.3	119.2	111.6	108.7	103.3	99.6	95.0	97.3	98.0
Natural sciences	121.7	117.1	114.8	106.7	105.2	101.2	99.7	95.5	97.2	98.2
Life sciences	98.0	98.3	97.8	92.5	91.0	91.2	91.4	89.0	95.3	97.8
Physical sciences	139.8	130.6	127.5	115.4	115.4	109.2	106.4	99.7	98.8	98.3
Mathematics	164.7	154.9	146.7	141.6	133.9	117.6	113.0	110.6	100.3	99.5
Computer sciences and engineering	133.9	136.4	131.1	124.8	118.1	109.0	99.6	93.7	97.5	97.7
Computer and information sciences	50.8	66.3	77.8	78.6	84.5	96.8	85.7	77.8	93.7	95.2
Engineering	142.1	143.3	136.4	129.3	121.4	110.2	101.0	95.3	97.9	97.9

Table 28-1 Index of number of degrees conferred in the natural and computer sciences and engineering (1981=100), by degree level and field of study: Academic years ending 1971–1990 — Continued

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989[1]	1990[2]
Bachelor's degrees										
All fields	100.0	101.9	103.7	104.2	104.7	105.6	106.0	106.2	108.9	112.2
Total science and engineering	100.0	105.5	112.6	120.1	126.1	127.3	123.1	115.1	109.4	105.4
Natural sciences	100.0	98.8	96.9	96.5	98.8	97.8	95.3	90.0	87.5	86.8
Life sciences	100.0	96.4	92.5	89.4	89.0	89.1	88.2	85.1	83.4	86.0
Physical sciences	100.0	100.4	97.7	98.8	99.1	90.7	83.4	74.2	71.8	67.3
Mathematics	100.0	104.7	112.4	119.3	136.7	147.2	148.8	143.4	137.4	131.8
Computer sciences and engineering	100.0	111.3	126.3	140.5	149.8	153.0	147.3	136.9	128.4	121.6
Computer and information sciences	100.0	134.0	162.1	212.8	257.1	277.0	262.3	228.5	201.4	181.4
Engineering	100.0	106.7	119.0	125.9	128.1	127.9	124.1	118.4	113.6	109.5
Master's degrees										
All fields	100.0	99.9	98.0	96.1	96.8	97.6	97.9	101.0	105.0	109.5
Total science and engineering	100.0	106.4	110.8	116.7	122.0	126.0	129.8	133.8	138.4	139.5
Natural sciences	100.0	102.1	100.0	99.2	99.3	101.8	100.7	100.7	102.2	101.1
Life sciences	100.0	98.3	95.3	90.4	84.6	83.9	82.9	79.8	83.0	81.3
Physical sciences	100.0	104.4	100.1	105.5	109.7	111.7	107.0	108.4	108.3	103.1
Mathematics	100.0	106.2	110.5	106.8	112.3	123.1	129.4	133.3	134.3	143.2
Computer sciences and engineering	100.0	109.3	117.9	128.3	136.9	142.1	149.0	155.7	162.4	164.8
Computer and information sciences	100.0	117.0	126.1	146.8	168.3	191.3	201.3	217.3	223.2	228.6
Engineering	100.0	107.4	115.8	123.7	129.0	129.6	135.8	140.2	147.1	148.7
Doctor's degrees										
All fields	100.0	99.2	99.4	100.8	100.0	102.1	103.5	105.7	108.4	116.0
Total science and engineering	100.0	101.9	100.0	102.6	105.9	109.7	115.5	122.8	128.1	139.6
Natural sciences	100.0	101.6	96.3	98.0	99.3	100.8	103.1	107.5	108.7	117.7
Life sciences	100.0	100.7	89.9	92.4	92.3	90.3	92.1	96.8	94.7	103.4
Physical sciences	100.0	104.6	104.1	105.3	108.3	113.1	116.9	121.1	122.8	132.7
Mathematics	100.0	93.5	95.9	95.5	96.0	101.9	99.6	103.3	119.0	125.7
Computer sciences and engineering	100.0	102.6	110.0	114.9	123.6	133.5	149.1	164.2	180.4	198.6
Computer and information sciences	100.0	99.6	104.0	99.6	98.4	136.5	148.4	169.8	218.7	247.2
Engineering	100.0	102.9	110.5	116.4	126.1	133.2	149.2	163.6	176.6	193.9

[1] Revised from previously published figures.

[2] Preliminary.

NOTE: The engineering category includes degrees conferred in engineering technologies. At the bachelor's degree level, 28.6 percent of degrees in the engineering category for 1989 were in engineering technologies. Were engineering technologies excluded from the engineering category, the index of bachelor's degrees conferred for 1985 would have been 121.9 (compared to 128.1) and for 1989 would have been 104.8 (compared to 113.7).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 235, 236, and 237 and unpublished data (based on IPEDS/HEGIS surveys of degrees conferred).

Table 28-2 Percentage of degrees conferred in the natural and computer sciences and engineering, by degree level and field of study: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Bachelor's degrees										
Total	16.0	15.4	15.3	15.5	15.4	15.5	15.9	16.3	16.8	17.3
Natural sciences	9.8	9.2	9.3	9.6	9.8	9.9	9.8	9.5	9.1	8.7
Life sciences	4.3	4.2	4.6	5.1	5.6	5.9	5.8	5.6	5.3	5.0
Physical sciences	2.5	2.3	2.2	2.2	2.3	2.3	2.4	2.5	2.5	2.5
Mathematics	3.0	2.7	2.5	2.3	2.0	1.7	1.5	1.4	1.3	1.2
Computer sciences and engineering	6.2	6.1	6.0	5.8	5.6	5.6	6.1	6.8	7.7	8.6
Computer and information sciences	0.3	0.4	0.5	0.5	0.5	0.6	0.7	0.8	0.9	1.2
Engineering	6.0	5.8	5.6	5.3	5.1	5.0	5.4	6.0	6.8	7.4
Master's degrees										
Total	15.3	14.5	13.8	12.7	11.7	11.2	11.1	11.3	11.2	11.6
Natural sciences	7.5	7.0	6.7	6.3	5.7	5.1	5.1	5.1	5.1	4.9
Life sciences	2.5	2.4	2.4	2.4	2.2	2.1	2.2	2.2	2.3	2.2
Physical sciences	2.8	2.5	2.4	2.2	2.0	1.8	1.7	1.8	1.8	1.8
Mathematics	2.3	2.1	1.9	1.7	1.5	1.2	1.2	1.1	1.0	1.0
Computer sciences and engineering	7.8	7.5	7.1	6.4	6.0	6.1	6.0	6.2	6.2	6.7
Computer and information sciences	0.7	0.8	0.8	0.8	0.8	0.8	0.9	1.0	1.0	1.2
Engineering	7.1	6.7	6.3	5.6	5.2	5.2	5.1	5.3	5.1	5.4
Doctor's degrees										
Total	40.5	38.1	35.6	34.3	33.2	31.5	31.2	30.8	30.9	31.3
Natural sciences	28.8	26.6	25.0	23.9	23.4	22.5	22.8	22.6	22.5	22.8
Life sciences	11.4	10.9	10.5	10.2	9.9	10.0	10.2	10.3	10.8	11.1
Physical sciences	13.7	12.3	11.5	10.7	10.6	10.1	10.1	9.8	9.5	9.5
Mathematics	3.7	3.4	3.1	3.0	2.9	2.5	2.5	2.5	2.2	2.2
Computer sciences and engineering	11.7	11.5	10.6	10.4	9.7	9.0	8.4	8.2	8.4	8.4
Computer and information sciences	0.4	0.5	0.6	0.6	0.6	0.7	0.6	0.6	0.7	0.7
Engineering	11.3	11.0	10.0	9.8	9.1	8.3	7.8	7.6	7.7	7.7

Table 28-2 Percentage of degrees conferred in the natural and computer sciences and engineering, by degree level and field of study: Academic years ending 1971–1990 — Continued

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989[1]	1990[2]
Bachelor's degrees										
Total	18.0	18.6	19.6	20.7	21.7	21.7	20.9	19.5	18.1	16.9
Natural sciences	8.4	8.1	7.8	7.8	7.9	7.8	7.5	7.1	6.7	6.5
Life sciences	4.6	4.4	4.1	4.0	3.9	3.9	3.8	3.7	3.5	3.5
Physical sciences	2.6	2.5	2.4	2.4	2.4	2.2	2.0	1.8	1.7	1.5
Mathematics	1.2	1.2	1.3	1.4	1.5	1.7	1.7	1.6	1.5	1.4
Computer sciences and engineering	9.6	10.5	11.7	13.0	13.8	14.0	13.4	12.4	11.4	10.4
Computer and information sciences	1.6	2.1	2.5	3.3	4.0	4.2	4.0	3.5	3.0	2.6
Engineering	8.0	8.4	9.2	9.7	9.8	9.7	9.4	8.9	8.4	7.8
Master's degrees										
Total	11.8	12.5	13.3	14.3	14.8	15.2	15.6	15.6	15.5	15.0
Natural sciences	4.7	4.8	4.8	4.8	4.8	4.9	4.8	4.7	4.5	4.3
Life sciences	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.5
Physical sciences	1.8	1.9	1.8	2.0	2.0	2.0	2.0	1.9	1.8	1.7
Mathematics	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1
Computer sciences and engineering	7.1	7.7	8.5	9.4	10.0	10.3	10.8	10.9	10.9	10.7
Computer and information sciences	1.4	1.7	1.8	2.2	2.5	2.8	2.9	3.1	3.0	3.0
Engineering	5.6	6.1	6.7	7.3	7.5	7.5	7.8	7.8	7.9	7.7
Doctor's degrees										
Total	31.6	32.4	31.7	32.1	33.4	33.9	35.2	36.7	37.3	38.0
Natural sciences	23.0	23.6	22.3	22.4	22.9	22.7	22.9	23.4	23.1	23.3
Life sciences	11.3	11.4	10.2	10.3	10.4	10.0	10.0	10.3	9.9	10.1
Physical sciences	9.5	10.0	10.0	10.0	10.3	10.6	10.8	10.9	10.8	10.9
Mathematics	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.4	2.4
Computer sciences and engineering	8.5	8.8	9.4	9.7	10.6	11.2	12.3	13.3	14.2	14.6
Computer and information sciences	0.8	0.8	0.8	0.8	0.8	1.0	1.1	1.2	1.5	1.6
Engineering	7.8	8.1	8.6	9.0	9.8	10.1	11.2	12.0	12.7	13.0

[1] Revised from previously published figures.

[2] Preliminary.

NOTE: The engineering category includes degrees conferred in engineering technologies. At the bachelor's degree level, 28.6 percent of degrees in the engineering category for 1989 were in engineering technologies. Were engineering technologies excluded from the percentage of degrees conferred in engineering for 1985 would have been 7.9 (compared to 9.8) and for 1989 would have been 6.5 (compared to 8.4).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 235, 236, and 237 and unpublished data (based on IPEDS/HEGIS surveys of degrees conferred).

Table 28-3 Number of degrees conferred in the natural and computer sciences and engineering, by degree level and field of study: Academic years ending 1971–1990

Field of study	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Bachelor's degrees										
All fields	839,730	887,273	922,362	945,776	922,933	925,746	919,549	921,204	921,390	929,417
Total science and engineering	134,390	136,317	141,565	146,195	142,585	143,707	145,988	149,912	154,953	161,205
Natural sciences	81,956	81,751	85,996	91,153	90,700	91,724	90,298	87,057	83,859	81,158
Life sciences	35,743	37,293	42,233	48,340	51,741	54,275	53,605	51,502	48,846	46,370
Physical sciences	21,412	20,745	20,696	21,178	20,778	21,465	22,497	22,986	23,207	23,410
Mathematics	24,801	23,713	23,067	21,635	18,181	15,984	14,196	12,569	11,806	11,378
Computer sciences and engineering	52,434	54,566	55,569	55,042	51,885	51,983	55,690	62,855	71,094	80,047
Computer and information sciences	2,388	3,402	4,304	4,756	5,033	5,652	6,407	7,201	8,719	11,154
Engineering	50,046	51,164	51,265	50,286	46,852	46,331	49,283	55,654	62,375	68,893
Master's degrees										
All fields	230,509	251,633	263,371	277,033	292,450	311,771	317,164	311,620	301,079	298,081
Total science and engineering	35,317	36,523	36,280	35,103	34,331	34,850	35,183	35,176	33,868	34,479
Natural sciences	17,286	17,586	17,548	17,448	16,684	15,905	16,140	15,740	15,318	14,589
Life sciences	5,728	6,101	6,263	6,552	6,550	6,582	7,114	6,806	6,831	6,510
Physical sciences	6,367	6,287	6,257	6,062	5,807	5,466	5,331	5,561	5,451	5,219
Mathematics	5,191	5,198	5,028	4,834	4,327	3,857	3,695	3,373	3,036	2,860
Computer sciences and engineering	18,031	18,937	18,732	17,655	17,647	18,945	19,043	19,436	18,550	19,890
Computer and information sciences	1,588	1,977	2,113	2,276	2,299	2,603	2,798	3,038	3,055	3,647
Engineering	16,443	16,960	16,619	15,379	15,348	16,342	16,245	16,398	15,495	16,243
Doctor's degrees										
All fields	32,107	33,363	34,777	33,816	34,083	34,064	33,232	32,131	32,730	32,615
Total science and engineering	13,000	12,722	12,398	11,606	11,306	10,744	10,363	9,883	10,116	10,196
Natural sciences	9,234	8,884	8,710	8,096	7,985	7,679	7,561	7,247	7,374	7,449
Life sciences	3,645	3,653	3,636	3,439	3,384	3,392	3,397	3,309	3,542	3,636
Physical sciences	4,390	4,103	4,006	3,626	3,626	3,431	3,341	3,133	3,102	3,089
Mathematics	1,199	1,128	1,068	1,031	975	856	823	805	730	724
Computer sciences and engineering	3,766	3,838	3,688	3,510	3,321	3,065	2,802	2,636	2,742	2,747
Computer and information sciences	128	167	196	198	213	244	216	196	236	240
Engineering	3,638	3,671	3,492	3,312	3,108	2,821	2,586	2,440	2,506	2,507

Table 28-3 Number of degrees conferred in the natural and computer sciences and engineering, by degree level and field of study: Academic years ending 1971–1990 — Continued

Field of study	1981	1982	1983	1984	1985	1986	1987	1988	1989[1]	1990[2]
Bachelor's degrees										
All fields	935,140	952,998	969,510	974,309	979,477	987,823	991,339	993,362	1,018,755	1,049,657
Total science and engineering	168,367	177,562	189,620	202,138	212,306	214,403	207,315	193,764	184,142	177,442
Natural sciences	78,246	77,290	75,840	75,522	77,323	76,561	74,577	70,425	68,463	67,898
Life sciences	43,216	41,639	39,982	38,640	38,445	38,524	38,114	36,761	36,059	37,170
Physical sciences	23,952	24,052	23,405	23,671	23,732	21,731	19,974	17,776	17,186	16,131
Mathematics	11,078	11,599	12,453	13,211	15,146	16,306	16,489	15,888	15,218	14,597
Computer sciences and engineering	90,121	100,272	113,780	126,616	134,983	137,842	132,738	123,339	115,679	109,544
Computer and information sciences	15,121	20,267	24,510	32,172	38,878	41,889	39,664	34,548	30,454	27,434
Engineering	75,000	80,005	89,270	94,444	96,105	95,953	93,074	88,791	85,225	82,110
Master's degrees										
All fields	295,739	295,546	289,921	284,263	286,251	288,567	289,557	298,733	310,621	323,844
Total science and engineering	34,756	36,989	38,494	40,574	42,395	43,805	45,111	46,511	48,117	48,476
Natural sciences	13,829	14,115	13,823	13,723	13,737	14,074	13,927	13,919	14,131	13,985
Life sciences	5,978	5,874	5,696	5,406	5,059	5,013	4,954	4,769	4,961	4,861
Physical sciences	5,284	5,514	5,290	5,576	5,796	5,902	5,652	5,727	5,723	5,447
Mathematics	2,567	2,727	2,837	2,741	2,882	3,159	3,321	3,423	3,447	3,677
Computer sciences and engineering	20,927	22,874	24,671	26,851	28,658	29,731	31,184	32,592	33,986	34,491
Computer and information sciences	4,218	4,935	5,321	6,190	7,101	8,070	8,491	9,166	9,414	9,643
Engineering	16,709	17,939	19,350	20,661	21,557	21,661	22,693	23,426	24,572	24,848
Doctor's degrees										
All fields	32,958	32,707	32,775	33,209	32,943	33,653	34,120	34,839	35,720	38,238
Total science and engineering	10,400	10,597	10,401	10,670	11,012	11,405	12,014	12,773	13,318	14,515
Natural sciences	7,587	7,710	7,308	7,438	7,534	7,651	7,820	8,154	8,244	8,927
Life sciences	3,718	3,743	3,341	3,437	3,432	3,358	3,423	3,598	3,520	3,844
Physical sciences	3,141	3,286	3,269	3,306	3,403	3,551	3,672	3,804	3,858	4,168
Mathematics	728	681	698	695	699	742	725	752	866	915
Computer sciences and engineering	2,813	2,887	3,093	3,232	3,478	3,754	4,194	4,619	5,074	5,588
Computer and information sciences	252	251	262	251	248	344	374	428	551	623
Engineering	2,561	2,636	2,831	2,981	3,230	3,410	3,820	4,191	4,523	4,965

[1] Revised from previously published figures.
[2] Preliminary.

NOTE: The engineering category includes degrees conferred in engineering technologies. In 1981, 11,713 bachelor's degrees were awarded in engineering technologies (or 18.5 percent of bachelor's degrees in the engineering category); in 1985, 18,951 (or 24.6 percent) were; and in 1989, 18,977 (or 28.6 percent) were.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 235, 236, and 237 and unpublished data (based on IPEDS/HEGIS surveys of degrees conferred).

Table 29-1 Rates of labor force participation, employment, and unemployment of recent high school graduates, by sex: 1960–1990

Year	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	76.7	65.0	15.2	88.5	75.3	14.9	69.5	58.8	15.3
1961	79.7	65.4	17.9	86.1	70.1	18.5	75.8	62.5	17.6
1962	79.5	68.3	14.1	90.8	77.8	14.3	71.4	61.5	13.8
1963	78.9	64.7	18.0	89.7	72.6	19.1	71.8	59.5	17.1
1964	77.9	63.4	18.7	90.9	79.2	12.9	69.8	53.5	23.4
1965	82.1	71.9	12.4	91.0	84.3	7.4	75.8	63.2	16.6
1966	75.7	64.9	14.2	87.3	79.7	8.7	68.4	55.8	18.5
1967	78.7	65.9	16.2	86.6	78.3	9.5	73.5	57.7	21.4
1968	77.8	67.3	13.5	88.1	79.1	10.2	71.6	60.2	16.0
1969	79.1	70.1	11.4	90.0	83.1	7.6	71.6	61.1	14.7
1970	77.2	63.2	18.1	87.4	76.1	12.9	68.8	52.6	23.6
1971	78.7	65.1	17.2	90.0	77.5	13.9	69.9	55.6	20.5
1972	82.2	70.1	14.7	91.2	80.1	12.2	74.9	62.1	17.1
1973	80.6	70.7	12.3	90.4	81.8	9.5	72.9	61.9	15.1
1974	83.3	69.1	17.0	89.8	76.0	15.4	77.5	63.1	18.6
1975	81.3	65.1	19.9	91.5	74.1	19.1	72.6	57.5	20.8
1976	84.0	68.9	18.1	91.3	75.9	16.8	76.8	61.7	19.6
1977	85.3	71.9	15.7	90.8	77.7	14.4	80.9	67.1	17.0
1978	86.2	74.0	14.1	91.7	81.4	11.2	81.3	67.5	17.0
1979	86.8	72.4	16.5	92.0	79.1	14.0	82.3	66.7	18.9
1980	85.0	68.9	19.0	89.7	72.6	19.1	80.9	65.8	18.6
1981	83.9	65.9	21.4	86.9	70.0	19.5	81.0	62.1	23.4
1982	82.0	60.4	26.3	85.8	64.9	24.4	78.2	56.0	28.5
1983	84.5	62.9	25.5	88.8	66.1	25.6	80.5	60.0	25.4
1984	83.0	64.0	22.9	89.7	69.0	23.0	77.1	59.6	22.7
1985	82.3	62.0	24.6	86.1	65.0	24.5	78.8	59.3	24.7
1986	81.4	65.2	19.9	86.2	69.5	19.4	77.3	61.6	20.3
1987	83.8	68.9	17.8	89.1	76.9	13.7	79.1	61.8	21.9
1988	84.7	71.9	15.1	88.5	74.1	16.2	80.4	69.4	13.7
1989	84.4	71.9	14.7	89.3	77.8	12.9	79.1	65.7	16.9
1990	83.4	67.5	19.0	89.5	74.1	17.2	76.7	60.3	21.4

NOTE: The labor force participation rate is the percentage of the population either employed or unemployed. Those not in the labor force are neither employed nor looking for work. The employment rate is the percentage of the population employed. The unemployment rate is the percentage of the labor force unemployed. The unemployed are those without a job and looking for work. See supplemental note to *indicator 29* for a comparison of these labor force statistics.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics Derived from the Current Population Survey: 1940–1986*, and unpublished tabulations from the October Current Population Survey.

Table 29-2 Rates of labor force participation, employment, and unemployment of recent high school dropouts, by sex: 1960–1990

Year	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	62.2	50.9	18.2	76.4	61.8	19.0	49.2	40.8	17.0
1961	67.5	49.4	26.8	83.8	60.3	28.0	50.9	38.3	24.7
1962	56.5	40.4	28.6	84.9	61.9	27.1	34.0	23.3	31.5
1963	65.9	45.1	31.7	83.3	64.4	22.7	49.6	27.0	45.7
1964	55.3	41.6	24.8	76.6	63.0	17.7	37.8	24.0	36.5
1965	61.0	47.9	21.4	82.8	66.8	19.4	36.4	26.8	26.5
1966	62.3	51.4	17.4	80.3	69.4	13.6	44.4	33.6	24.4
1967	63.7	50.3	21.0	80.3	65.0	19.1	45.6	34.4	24.6
1968	63.9	50.0	21.8	80.3	65.5	18.5	47.0	34.0	27.7
1969	61.3	51.0	16.8	81.8	69.8	14.7	39.4	30.9	21.4
1970	60.0	44.7	25.5	78.9	56.5	28.4	39.5	31.9	19.3
1971	63.6	46.8	26.4	80.8	59.3	26.6	42.9	31.7	26.2
1972	62.7	46.0	26.5	82.3	63.2	23.2	42.3	28.5	32.7
1973	66.2	51.5	22.2	81.1	61.5	24.2	47.4	38.7	18.3
1974	67.0	48.1	28.3	82.4	62.2	24.6	48.8	31.2	36.1
1975	62.7	41.4	34.0	82.4	54.1	34.3	43.4	29.0	33.3
1976	62.9	43.5	30.8	77.6	55.7	28.2	44.1	28.0	36.6
1977	68.5	50.2	26.7	81.0	60.9	24.8	54.0	38.0	29.5
1978	68.7	49.7	27.6	80.2	61.0	24.0	53.1	34.7	34.6
1979	65.9	48.8	26.0	79.0	64.0	19.0	53.4	34.0	36.4
1980	63.9	43.7	31.5	72.9	50.7	30.4	52.3	34.7	33.5
1981	63.5	40.5	36.2	74.1	52.6	29.0	52.6	28.0	46.7
1982	63.0	36.8	41.6	76.6	43.4	43.4	47.6	29.4	38.3
1983	63.1	43.2	31.6	75.4	50.8	32.7	48.1	34.0	29.5
1984	64.4	42.9	33.3	77.7	51.7	33.5	49.1	32.9	33.1
1985	67.5	43.5	35.6	81.3	50.8	37.5	52.2	35.4	32.2
1986	63.9	46.1	27.9	72.0	56.0	22.2	54.6	34.7	36.4
1987	66.3	41.2	37.8	73.7	45.6	38.1	57.5	36.0	37.4
1988	59.2	43.5	26.6	74.6	53.4	28.4	40.0	31.0	22.4
1989	65.5	47.1	28.1	74.5	52.3	29.8	54.7	40.9	25.2
1990	68.9	46.7	32.3	80.5	51.2	36.4	56.3	41.6	26.2

NOTE: See note to table 29-1. See supplemental note to *indicator 29* for a comparison of labor force statistics.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Labor Force Statistics Derived from the Current Population Survey: 1940-1986, and unpublished tabulations from the October Current Population Survey.

Table 29-3 Rates of labor force participation, employment, and unemployment of recent high school graduates, by race/ethnicity: 1973–1990

Year	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	83.2	74.9	10.0	69.9	49.8	28.8	(*)	(*)	(*)
1974	84.8	72.9	14.1	75.0	45.9	38.8	(*)	(*)	(*)
1975	82.4	68.9	16.4	69.3	36.9	46.7	(*)	(*)	(*)
1976	86.4	73.2	15.3	72.7	38.5	47.0	(*)	(*)	(*)
1977	87.3	76.1	12.8	74.4	43.3	41.8	81.6	65.8	(*)
1978	88.0	79.1	10.2	75.7	45.9	39.3	83.3	69.2	(*)
1979	88.9	76.4	14.0	71.8	44.1	38.5	82.4	69.4	(*)
1980	87.6	74.6	14.8	72.0	35.0	51.4	(*)	(*)	(*)
1981	87.4	73.0	16.4	69.0	31.5	54.3	(*)	(*)	(*)
1982	85.5	68.5	19.9	69.4	29.4	57.6	75.5	43.9	(*)
1983	85.9	69.8	18.8	75.9	34.9	54.1	(*)	(*)	(*)
1984	86.2	70.7	18.0	73.2	44.8	38.7	78.8	49.0	37.8
1985	85.0	71.0	16.5	76.6	34.4	55.1	(*)	(*)	(*)
1986	85.3	71.5	16.2	67.4	41.0	39.1	81.9	64.9	20.8
1987	87.8	75.3	14.3	73.8	46.9	36.4	69.2	53.8	22.2
1988	88.1	78.2	11.3	73.5	55.5	24.5	81.8	57.1	(*)
1989	88.3	77.6	12.1	71.0	53.5	24.5	74.7	49.3	(*)
1990	88.2	75.1	14.8	69.9	44.9	35.8	(*)	(*)	(*)

* Too few sample observations for a reliable estimate.

NOTE: See note to table 29-1. See supplemental note to *Indicator 29* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 29-4 Rates of labor force participation, employment, and unemployment of recent high school dropouts, by race/ethnicity: 1973–1990

Year	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	71.0	55.1	22.4	59.4	43.9	26.1	(*)	(*)	(*)
1974	73.8	53.9	27.0	58.1	35.9	38.1	(*)	(*)	(*)
1975	65.4	46.2	29.3	56.1	22.0	(*)	59.5	46.8	(*)
1976	68.9	49.7	27.9	44.8	20.8	(*)	(*)	(*)	(*)
1977	74.8	56.6	24.3	58.6	34.5	41.2	(*)	(*)	(*)
1978	75.2	54.2	27.9	59.5	41.1	30.9	70.7	50.7	(*)
1979	70.5	54.2	23.0	51.7	27.6	46.7	(*)	(*)	(*)
1980	69.8	51.2	26.7	51.5	20.8	(*)	66.3	47.7	(*)
1981	71.2	51.2	28.0	46.8	11.5	(*)	76.8	50.0	(*)
1982	69.5	44.5	36.0	58.2	16.4	(*)	(*)	(*)	(*)
1983	65.4	49.4	24.4	59.8	26.5	(*)	(*)	(*)	(*)
1984	71.9	51.3	28.6	55.4	23.8	(*)	53.6	35.7	(*)
1985	74.4	50.0	32.8	53.7	29.3	(*)	68.8	37.6	(*)
1986	69.6	50.5	27.4	60.5	31.6	(*)	60.8	46.4	23.7
1987	69.9	48.1	31.1	61.3	26.1	(*)	(*)	(*)	(*)
1988	65.1	47.6	27.0	35.7	17.3	(*)	64.4	55.4	(*)
1989	74.4	57.6	22.6	51.8	26.3	(*)	(*)	(*)	(*)
1990	74.8	56.2	24.9	65.9	30.5	(*)	(*)	(*)	(*)

* Too few sample observations for a reliable estimate.

NOTE: See note to table 29-1. See supplemental note to *Indicator 29* for a comparison of labor force statistics.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 29-5 Standard errors for estimated percentages in table 29-1

Year	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	2.5	2.8	2.4	3.0	4.1	3.6	3.4	3.7	3.2
1961	2.4	2.8	2.5	3.3	4.4	4.0	3.2	3.6	3.3
1962	2.3	2.7	2.3	2.6	3.7	3.3	3.4	3.7	3.1
1963	2.3	2.7	2.5	2.8	4.1	3.8	3.3	3.6	3.3
1964	2.2	2.6	2.4	2.5	3.5	3.0	3.1	3.4	3.5
1965	1.9	2.2	1.8	2.2	2.8	2.1	2.7	3.1	2.7
1966	2.1	2.4	2.0	2.6	3.2	2.4	2.9	3.1	2.9
1967	1.7	2.0	1.7	2.2	2.7	2.1	2.4	2.6	2.6
1968	1.8	2.0	1.6	2.2	2.8	2.2	2.4	2.6	2.3
1969	1.6	1.8	1.4	1.9	2.3	1.7	2.3	2.5	2.2
1970	1.7	1.9	1.7	2.0	2.5	2.1	2.5	2.7	2.7
1971	1.6	1.9	1.7	1.8	2.5	2.2	2.4	2.6	2.5
1972	1.4	1.7	1.5	1.6	2.2	1.9	2.2	2.4	2.2
1973	1.4	1.6	1.3	1.6	2.1	1.7	2.1	2.3	2.0
1974	1.3	1.7	1.5	1.6	2.2	2.0	2.0	2.4	2.2
1975	1.4	1.7	1.6	1.5	2.4	2.2	2.2	2.4	2.3
1976	1.3	1.7	1.5	1.5	2.2	2.0	2.2	2.5	2.4
1977	1.3	1.7	1.5	1.6	2.3	2.0	2.0	2.4	2.1
1978	1.3	1.6	1.4	1.5	2.1	1.8	1.9	2.3	2.1
1979	1.2	1.6	1.5	1.5	2.2	1.9	1.9	2.3	2.1
1980	1.3	1.7	1.6	1.6	2.3	2.1	2.1	2.5	2.3
1981	1.4	1.8	1.7	1.9	2.6	2.4	2.1	2.6	2.5
1982	1.5	1.9	1.9	1.9	2.7	2.6	2.3	2.8	2.9
1983	1.5	2.0	2.0	1.9	2.8	2.8	2.3	2.8	2.8
1984	1.6	2.0	1.9	1.9	2.8	2.7	2.4	2.8	2.7
1985	1.8	2.2	2.2	2.3	3.2	3.1	2.6	3.1	3.1
1986	1.7	2.0	1.9	2.2	2.9	2.7	2.4	2.8	2.7
1987	1.7	2.1	1.9	2.1	2.8	2.4	2.5	3.0	2.9
1988	1.8	2.3	2.0	2.2	3.1	2.7	2.9	3.4	2.8
1989	1.9	2.4	2.1	2.3	3.1	2.6	3.1	3.6	3.2
1990	2.0	2.6	2.3	2.3	3.3	3.0	3.3	3.9	3.7

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, *Labor Force Statistics. Derived from the Current Population Survey: 1940–1986*, and unpublished tabulations from the October Current Population Survey.

Table 29-6 Standard errors for estimated percentages in table 29-2

Year	Both sexes			Male			Female		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1960	4.6	4.8	4.7	5.9	6.7	6.2	6.6	6.5	7.1
1961	4.4	4.7	5.1	4.9	6.5	6.5	6.7	6.5	8.1
1962	5.2	5.2	6.3	5.7	7.7	7.6	6.7	6.0	11.2
1963	5.1	5.4	6.2	5.8	7.4	7.1	7.5	6.6	10.6
1964	3.6	3.6	4.2	4.6	5.2	4.7	4.7	4.2	7.6
1965	3.3	3.4	3.6	3.5	4.4	4.1	4.8	4.4	7.3
1966	3.6	3.7	3.5	4.1	4.8	4.0	5.1	4.9	6.7
1967	2.8	2.9	3.0	3.2	3.8	3.5	4.2	4.0	5.4
1968	2.8	2.9	3.0	3.3	3.9	3.5	4.2	3.9	5.4
1969	2.7	2.8	2.7	3.0	3.6	3.1	3.9	3.7	5.3
1970	2.6	2.7	3.0	3.1	3.7	3.8	3.8	3.6	4.9
1971	2.7	2.8	3.1	3.0	3.8	3.8	4.1	3.9	5.6
1972	2.6	2.7	3.0	2.9	3.6	3.5	3.7	3.4	5.5
1973	2.4	2.6	2.6	2.7	3.3	3.3	3.9	3.8	4.4
1974	2.4	2.5	2.8	2.6	3.3	3.2	3.8	3.5	5.2
1975	2.6	2.6	3.2	2.9	3.8	4.0	3.7	3.4	5.3
1976	2.5	2.6	3.1	2.9	3.5	3.6	3.9	3.6	5.8
1977	2.4	2.5	2.7	2.7	3.4	3.3	3.7	3.6	4.6
1978	2.3	2.5	2.7	2.7	3.3	3.2	3.8	3.7	5.0
1979	2.4	2.6	2.8	3.0	3.5	3.2	3.6	3.4	4.7
1980	2.5	2.6	3.1	3.1	3.5	3.8	4.0	3.8	5.2
1981	2.6	2.7	3.3	3.4	3.8	4.0	3.9	3.5	5.4
1982	2.9	2.9	3.7	3.5	4.1	4.6	4.4	4.0	6.1
1983	3.0	3.1	3.7	3.7	4.3	4.6	4.7	4.5	6.2
1984	3.0	3.1	3.7	3.6	4.3	4.6	4.6	4.4	6.2
1985	2.9	3.1	3.6	3.4	4.3	4.6	4.5	4.3	5.9
1986	3.1	3.2	3.7	4.0	4.4	4.4	4.7	4.5	6.2
1987	3.3	3.4	4.1	4.1	4.6	5.3	5.1	4.9	6.5
1988	3.5	3.5	4.1	4.2	4.8	5.0	5.3	5.0	7.1
1989	3.8	4.0	4.4	4.7	5.4	5.7	5.9	5.8	6.9
1990	3.9	4.2	4.7	4.5	5.7	6.1	6.0	6.0	7.1

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, Labor Force Statistics. Derived from the Current Population Survey: 1940–1986, and unpublished tabulations from the October Current Population Survey.

Table 29-7 Standard errors for estimated percentages in table 29-3

Year	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	1.5	1.7	1.3	5.2	5.7	6.1	(*)	(*)	(*)
1974	1.4	1.7	1.5	5.5	6.4	7.2	(*)	(*)	(*)
1975	1.5	1.8	1.6	5.8	6.1	7.6	(*)	(*)	(*)
1976	1.4	1.8	1.6	5.9	6.4	7.7	(*)	(*)	(*)
1977	1.4	1.7	1.5	5.8	6.6	7.6	6.8	8.4	(*)
1978	1.3	1.7	1.3	5.4	6.2	7.0	6.5	8.0	(*)
1979	1.3	1.7	1.5	5.9	6.5	7.5	6.3	7.7	(*)
1980	1.3	1.8	1.5	5.4	5.7	7.1	(*)	(*)	(*)
1981	1.4	1.9	1.7	5.6	5.6	7.2	(*)	(*)	(*)
1982	1.6	2.1	1.9	5.3	5.2	6.8	7.0	8.1	(*)
1983	1.6	2.2	2.0	4.9	5.5	6.6	(*)	(*)	(*)
1984	1.7	2.3	2.1	4.9	5.5	6.3	6.5	7.9	8.7
1985	1.9	2.4	2.1	5.5	6.2	7.4	(*)	(*)	(*)
1986	1.8	2.3	2.0	5.4	5.7	6.9	9.2	11.5	10.8
1987	1.7	2.3	2.0	6.2	7.1	8.0	9.9	10.7	10.8
1988	1.9	2.5	2.0	5.9	6.7	6.7	12.0	15.5	(*)
1989	2.0	2.6	2.1	7.1	7.8	8.0	13.8	15.8	(*)
1990	2.1	2.8	2.4	6.7	7.3	8.4	(*)	(*)	(*)

* Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 29-8 Standard errors for estimated percentages in table 29-4

Year	White			Black			Hispanic		
	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment	Labor force	Employment	Unemployment
1973	2.8	3.1	3.1	6.6	6.7	7.7	(*)	(*)	(*)
1974	2.8	3.2	3.3	6.4	6.2	8.3	(*)	(*)	(*)
1975	3.1	3.3	3.7	7.2	6.0	(*)	8.3	8.5	(*)
1976	2.9	3.2	3.4	7.5	6.1	(*)	(*)	(*)	(*)
1977	2.7	3.1	3.1	6.9	6.7	9.1	(*)	(*)	(*)
1978	2.8	3.2	3.3	6.6	6.6	8.1	8.1	8.9	(*)
1979	2.9	3.2	3.2	7.0	6.3	9.8	(*)	(*)	(*)
1980	3.1	3.4	3.6	7.4	6.0	(*)	7.8	8.3	(*)
1981	3.2	3.6	3.8	6.8	4.3	(*)	7.1	8.5	(*)
1982	3.5	3.7	4.3	8.0	6.0	(*)	(*)	(*)	(*)
1983	4.0	4.2	4.4	8.1	7.3	(*)	(*)	(*)	(*)
1984	3.6	4.0	4.3	8.9	7.6	(*)	8.8	8.5	(*)
1985	3.7	4.2	4.6	8.1	7.4	(*)	11.2	11.7	(*)
1986	4.0	4.4	4.7	10.1	9.6	(*)	10.2	10.4	11.4
1987	3.9	4.3	4.8	8.3	7.5	(*)	(*)	(*)	(*)
1988	4.3	4.5	5.0	9.4	7.5	(*)	13.1	13.6	(*)
1989	4.5	5.1	5.0	9.1	8.0	(*)	(*)	(*)	(*)
1990	4.7	5.4	5.4	10.2	9.9	(*)	(*)	(*)	(*)

* Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 30-1 Labor force participation rate of 25- to 34-year-old *males*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	95.8	93.9	91.2	95.9	97.9	94.3	95.2
1972	95.7	93.7	90.8	95.5	97.7	94.1	95.5
1973	95.3	94.0	91.9	95.4	96.5	91.9	95.8
1974	95.4	93.6	89.8	96.2	96.8	93.6	95.0
1975	94.7	89.3	89.8	93.7	96.1	94.2	96.1
1976	94.8	89.4	85.4	91.7	96.8	94.8	95.5
1977	95.2	92.2	87.5	94.6	96.4	94.1	96.2
1978	95.1	90.5	87.9	92.1	96.6	94.8	95.8
1979	95.1	89.6	86.3	91.5	96.5	95.2	97.0
1980	94.4	88.0	83.5	90.4	96.3	94.2	95.7
1981	94.7	89.3	85.2	91.6	96.1	94.2	96.1
1982	94.4	88.4	83.1	91.1	95.9	93.8	95.8
1983	94.0	88.4	81.2	92.2	94.9	94.2	95.2
1984	93.5	85.7	78.6	89.6	94.9	94.2	94.8
1985	93.8	87.2	81.9	89.8	95.1	94.4	94.9
1986	93.8	86.7	82.5	88.9	95.0	93.7	95.7
1987	93.6	88.0	85.1	89.3	94.6	93.9	94.9
1988	93.4	86.2	80.9	88.4	94.4	93.7	95.9
1989*	93.6	86.8	81.1	89.3	94.1	94.8	95.9
1990*	93.4	86.8	82.6	88.8	94.5	94.2	95.2
1991	92.9	84.8	81.4	86.4	94.0	93.9	95.3

*Revised for previously published data.

NOTE: The labor force participation rate is the percentage of the population either employed or unemployed, that is, without a job and looking for work. Those not in the labor force are neither employed nor looking for work.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-2 Labor force participation rate of 25- to 34-year-old *females*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	46.0	38.1	32.9	40.6	46.2	47.7	59.2
1972	47.9	39.6	37.0	40.8	47.3	49.9	61.5
1973	50.1	40.4	37.0	41.8	48.4	53.0	64.2
1974	52.6	42.2	37.0	44.5	50.2	56.5	68.7
1975	54.2	40.8	36.7	42.6	53.3	57.5	68.9
1976	56.8	43.6	38.4	46.0	54.6	60.9	71.3
1977	59.3	45.2	36.7	48.7	57.8	62.2	72.4
1978	61.9	48.0	41.0	49.2	60.2	66.4	74.3
1979	63.5	46.9	40.0	49.9	61.9	67.4	76.6
1980	66.0	49.3	41.6	52.8	64.3	70.5	77.5
1981	67.4	47.4	38.7	51.3	66.9	71.6	78.7
1982	68.0	46.2	41.4	48.3	66.6	73.1	80.7
1983	68.8	46.1	39.3	49.1	66.3	74.2	82.6
1984	69.9	47.1	37.5	51.3	67.8	74.2	82.9
1985	71.1	47.5	42.6	49.6	69.9	75.5	82.8
1986	71.4	50.5	40.5	54.8	69.8	75.2	82.4
1987	72.3	49.5	39.6	53.7	71.2	76.0	83.5
1988	72.7	50.0	38.3	55.4	71.1	78.3	83.2
1989*	72.6	47.9	42.0	50.6	71.1	77.4	84.1
1990*	73.7	50.5	44.5	53.2	72.1	78.0	85.0
1991	73.2	48.8	43.7	50.9	72.2	77.4	84.9

* Revised for previously published data.

NOTE: The labor force participation rate is the percentage of the population either employed or unemployed, that is, without a job and looking for work. Those not in the labor force are neither employed nor looking for work.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-3 Employment rate of 25- to 34-year-old *males*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	90.9	85.4	82.2	87.9	93.6	89.9	92.5
1972	91.6	87.2	85.0	88.5	93.7	90.4	93.6
1973	91.3	86.8	83.9	88.8	93.1	88.5	93.5
1974	91.5	87.2	82.9	90.2	93.0	90.0	92.7
1975	87.4	76.3	73.3	78.1	88.4	87.6	93.5
1976	88.4	77.9	74.9	79.6	89.6	89.0	92.8
1977	88.9	79.0	74.2	81.5	89.5	89.1	93.3
1978	90.1	80.4	77.0	82.4	90.8	91.2	93.5
1979	90.3	79.8	78.6	80.5	91.3	90.9	94.1
1980	88.1	76.3	71.6	77.7	87.0	88.5	93.4
1981	87.5	76.1	75.0	76.7	86.9	88.5	93.7
1982	84.4	71.4	68.0	73.2	83.3	85.2	91.9
1983	81.6	67.6	64.2	69.3	78.6	83.8	91.1
1984	85.3	70.3	67.0	72.2	84.8	87.9	91.9
1985	86.9	75.1	73.0	76.0	86.1	89.7	92.2
1986	86.7	72.0	69.4	73.3	86.2	89.0	93.7
1987	86.8	74.5	73.3	75.0	86.8	89.0	92.1
1988	87.4	74.3	71.4	75.5	87.2	89.8	93.7
1989*	88.2	76.1	72.8	77.6	87.8	91.1	93.7
1990	87.9	75.6	75.0	75.9	88.6	89.7	93.1
1991	85.2	70.2	71.0	69.9	84.9	88.6	91.8

* Revised for previously published data.

NOTE: The employment rate is the percentage of the population employed.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-4 Employment rate of 25- to 34-year-old *females*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	42.7	33.4	29.3	35.2	43.1	44.9	56.9
1972	45.1	35.3	33.5	36.1	44.9	47.4	59.8
1973	47.4	36.7	32.8	38.4	45.7	51.0	62.6
1974	49.7	37.8	33.3	39.8	47.6	54.2	66.6
1975	49.3	33.9	30.5	34.5	48.0	53.6	66.4
1976	52.3	37.8	33.7	39.5	49.8	56.5	68.8
1977	54.6	38.3	31.8	41.0	53.0	58.0	69.5
1978	57.9	40.2	35.6	42.4	55.9	63.3	72.1
1979	59.6	40.3	33.6	43.2	58.0	64.2	74.0
1980	61.6	42.3	35.0	45.6	59.5	66.3	75.5
1981	62.5	39.7	32.5	42.7	61.3	67.6	76.4
1982	62.1	37.6	32.8	39.7	59.6	68.2	77.7
1983	62.1	35.4	31.3	37.1	58.8	68.3	79.2
1984	64.2	38.5	31.7	41.5	61.0	69.5	80.4
1985	65.9	38.7	35.1	40.3	63.9	71.0	80.6
1986	66.2	41.4	35.2	44.1	63.8	70.6	80.3
1987	67.5	41.1	34.3	44.0	65.6	72.2	81.4
1988	68.8	43.1	34.5	46.9	66.8	74.8	81.2
1989*	68.7	41.1	36.9	43.0	66.9	74.0	82.1
1990	69.6	42.5	38.6	44.3	67.5	74.5	83.2
1991	68.6	40.3	35.5	42.2	67.0	73.5	82.6

* Revised for previously published data.

NOTE: The employment rate is the percentage of the population employed.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-5 Unemployment rate of 25- to 34-year-old *males*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	5.2	9.1	9.8	8.3	4.4	4.6	2.8
1972	4.3	7.0	6.4	7.3	4.1	4.0	2.0
1973	4.2	7.7	8.7	6.9	3.5	3.7	2.4
1974	4.1	6.9	7.7	6.3	4.0	3.9	2.4
1975	7.6	12.8	18.4	16.7	9.5	6.1	2.4
1976	6.8	12.9	12.3	13.2	7.5	6.1	2.8
1977	6.7	14.3	15.2	13.9	7.1	5.4	3.0
1978	5.2	11.2	12.4	10.5	6.0	3.8	2.4
1979	5.0	10.9	9.0	12.1	5.4	4.5	2.0
1980	6.7	13.4	14.3	14.1	9.7	6.0	2.5
1981	7.6	12.8	11.9	16.3	9.5	6.1	2.4
1982	10.6	19.2	18.2	19.6	13.1	9.2	4.0
1983	13.1	23.6	20.9	24.8	17.2	11.1	4.3
1984	8.7	18.0	14.7	19.5	10.6	6.7	3.0
1985	7.3	13.9	10.8	15.3	9.5	4.9	2.8
1986	7.5	17.0	15.9	17.6	9.3	5.0	2.1
1987	7.3	15.4	13.8	16.0	8.2	5.3	3.0
1988	6.4	13.9	11.7	14.6	7.6	4.2	2.3
1989*	5.8	12.3	10.2	13.1	6.7	3.9	2.3
1990*	5.9	12.8	9.2	14.5	6.3	4.8	2.3
1991	8.4	17.2	12.8	19.1	9.7	5.6	3.6

* Revised for previously published data.

NOTE: The unemployment rate is the percentage of the labor force unemployed. The unemployed are those without it excludes those without jobs and not looking for work.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-6 Unemployment rate of 25- to 34-year-old *females*, by years of schooling completed: 1971–1991

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	7.3	12.4	11.1	13.2	6.6	5.9	4.0
1972	5.8	10.9	9.5	11.4	5.1	5.1	2.8
1973	5.3	9.1	11.4	8.2	5.7	3.7	2.6
1974	5.5	10.4	10.1	10.5	5.3	4.2	3.1
1975	9.1	16.9	17.1	19.0	10.1	6.9	3.6
1976	8.0	13.4	12.2	14.0	8.8	7.2	3.6
1977	7.9	15.4	13.2	15.7	8.3	6.8	4.1
1978	6.5	16.2	13.1	13.8	7.2	4.7	2.9
1979	6.2	14.2	16.0	13.5	6.2	4.7	3.5
1980	6.8	14.2	15.7	13.6	7.5	5.9	2.6
1981	7.3	16.3	16.0	16.6	8.5	5.6	2.9
1982	8.8	18.7	20.8	17.8	10.6	6.7	3.7
1983	9.7	23.3	20.3	24.4	11.3	7.9	4.1
1984	8.1	18.2	15.4	19.1	10.1	6.4	3.1
1985	7.3	18.6	17.7	18.8	8.6	5.9	2.7
1986	7.3	18.0	13.2	19.4	8.6	6.1	2.5
1987	6.6	16.9	13.4	18.0	7.9	5.0	2.5
1988	5.4	13.9	10.1	15.1	6.1	4.4	2.4
1989*	5.3	14.3	12.2	15.0	5.9	4.4	2.3
1990*	5.6	15.7	13.4	16.6	6.4	4.4	2.1
1991	6.3	17.4	18.6	17.0	7.1	5.0	2.7

* Revised for previously published data.

NOTE: The unemployment rate is the percentage of the labor force unemployed. The unemployed are those without it excludes those without jobs and not looking for work.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-7 Standard errors for estimated percentages in table 30-1

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.3	0.6	1.2	0.7	0.3	0.7	0.6
1972	0.3	0.6	1.2	0.7	0.3	0.7	0.6
1973	0.3	0.6	1.1	0.7	0.4	0.8	0.5
1974	0.3	0.7	1.3	0.7	0.3	0.7	0.5
1975	0.3	0.9	1.4	0.9	0.4	0.6	0.5
1976	0.3	0.9	1.7	1.0	0.3	0.6	0.5
1977	0.2	0.8	1.7	0.8	0.4	0.6	0.4
1978	0.2	0.8	1.6	1.0	0.3	0.5	0.4
1979	0.2	0.9	1.6	1.0	0.3	0.5	0.4
1980	0.3	1.0	1.9	1.1	0.4	0.6	0.4
1981	0.3	0.9	1.8	1.0	0.4	0.6	0.4
1982	0.3	1.0	2.0	1.1	0.4	0.6	0.4
1983	0.3	1.0	2.0	1.0	0.4	0.5	0.5
1984	0.3	1.0	2.0	1.1	0.4	0.6	0.5
1985	0.3	1.0	2.0	1.1	0.4	0.5	0.5
1986	0.3	1.0	1.9	1.1	0.4	0.6	0.4
1987	0.3	0.9	1.8	1.0	0.4	0.6	0.5
1988	0.3	0.9	2.0	1.0	0.4	0.6	0.4
1989	0.3	0.9	1.9	1.0	0.4	0.5	0.4
1990	0.3	0.9	1.8	1.0	0.4	0.5	0.5
1991	0.3	1.0	1.9	1.1	0.4	0.6	0.5

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-8 Standard errors of estimated percentages in table 30-2

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.6	1.2	2.1	1.5	0.9	1.7	1.7
1972	0.6	1.2	2.2	1.5	0.9	1.6	1.6
1973	0.6	1.2	2.1	1.5	0.9	1.6	1.5
1974	0.6	1.3	2.2	1.5	0.9	1.4	1.3
1975	0.6	1.2	2.2	1.5	0.8	1.4	1.3
1976	0.6	1.3	2.3	1.6	0.8	1.3	1.2
1977	0.5	1.3	2.3	1.5	0.8	1.3	1.1
1978	0.5	1.3	2.3	1.6	0.8	1.2	1.1
1979	0.5	1.3	2.4	1.6	0.8	1.1	1.0
1980	0.5	1.4	2.5	1.7	0.8	1.1	1.0
1981	0.5	1.4	2.5	1.7	0.8	1.1	1.0
1982	0.5	1.4	2.5	1.7	0.8	1.0	0.9
1983	0.5	1.4	2.6	1.7	0.8	1.0	0.9
1984	0.5	1.4	2.6	1.7	0.8	1.0	0.8
1985	0.5	1.5	2.7	1.8	0.7	1.0	0.8
1986	0.5	1.5	2.6	1.7	0.7	1.0	0.8
1987	0.5	1.4	2.6	1.7	0.7	0.9	0.8
1988	0.5	1.5	2.5	1.8	0.7	0.9	0.8
1989	0.5	1.5	2.6	1.8	0.7	0.9	0.8
1990	0.5	1.4	2.6	1.7	0.7	0.9	0.8
1991	0.5	1.4	2.6	1.7	0.7	0.9	0.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-9 Standard errors of estimated percentages in table 30-3

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.4	1.0	1.7	1.1	0.5	1.0	0.8
1972	0.4	0.9	1.6	1.1	0.5	0.9	0.7
1973	0.4	0.9	1.6	1.1	0.5	1.0	0.7
1974	0.3	0.9	1.7	1.1	0.5	0.9	0.7
1975	0.4	1.2	2.1	1.5	0.6	0.9	0.6
1976	0.4	1.3	2.3	1.5	0.6	0.8	0.6
1977	0.4	1.2	2.3	1.4	0.6	0.8	0.5
1978	0.3	1.2	2.2	1.4	0.6	0.7	0.5
1979	0.3	1.2	2.1	1.5	0.5	0.7	0.5
1980	0.4	1.4	2.5	1.7	0.7	0.8	0.6
1981	0.4	1.4	2.4	1.6	0.6	0.8	0.5
1982	0.4	1.5	2.7	1.7	0.7	0.9	0.6
1983	0.4	1.5	2.7	1.8	0.8	0.9	0.6
1984	0.4	1.4	2.6	1.7	0.6	0.8	0.6
1985	0.4	1.4	2.5	1.6	0.6	0.7	0.6
1986	0.4	1.4	2.5	1.6	0.6	0.7	0.5
1987	0.4	1.3	2.4	1.5	0.6	0.8	0.6
1988	0.4	1.3	2.5	1.5	0.6	0.7	0.5
1989	0.3	1.3	2.4	1.5	0.6	0.7	0.5
1990	0.4	1.2	2.2	1.5	0.5	0.7	0.6
1991	0.4	1.4	2.5	1.6	0.6	0.8	0.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-10 Standard errors for estimated percentages in table 30-4

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.9	1.9	3.5	2.3	1.3	2.4	2.2
1972	0.9	1.9	3.5	2.3	1.3	2.3	2.0
1973	0.8	1.9	3.4	2.3	1.2	2.2	1.9
1974	0.8	1.9	3.6	2.2	1.2	1.9	1.6
1975	0.8	1.9	3.4	2.2	1.2	1.9	1.5
1976	0.7	1.9	3.6	2.3	1.1	1.7	1.4
1977	0.7	1.9	3.7	2.2	1.1	1.6	1.3
1978	0.7	1.9	3.5	2.2	1.1	1.5	1.3
1979	0.7	1.9	3.6	2.2	1.0	1.4	1.2
1980	0.7	2.0	3.8	2.4	1.0	1.4	1.2
1981	0.6	2.0	3.9	2.4	1.0	1.3	1.2
1982	0.6	2.0	3.8	2.4	1.0	1.3	1.1
1983	0.6	2.0	3.9	2.4	1.0	1.3	1.0
1984	0.6	2.1	4.0	2.4	1.0	1.2	1.0
1985	0.6	2.1	3.9	2.4	0.9	1.2	1.0
1986	0.6	2.0	4.0	2.3	0.9	1.2	1.0
1987	0.6	2.0	4.0	2.3	0.9	1.1	0.9
1988	0.6	2.0	4.0	2.4	0.9	1.1	0.9
1989	0.6	2.1	3.9	2.4	0.9	1.1	0.9
1990	0.6	2.0	3.8	2.4	0.9	1.1	0.9
1991	0.6	2.0	3.8	2.3	0.9	1.1	0.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-11 Standard errors of estimated percentages in table 30-5

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.3	0.8	1.3	1.0	0.4	0.7	0.5
1972	0.3	0.7	1.1	0.9	0.4	0.6	0.4
1973	0.3	0.7	1.2	0.9	0.4	0.6	0.4
1974	0.2	0.7	1.2	0.9	0.4	0.6	0.4
1975	0.3	1.0	1.8	1.4	0.6	0.7	0.4
1976	0.3	1.0	1.7	1.3	0.5	0.6	0.4
1977	0.3	1.0	1.9	1.3	0.5	0.6	0.4
1978	0.3	1.0	1.7	1.2	0.5	0.5	0.3
1979	0.2	1.0	1.5	1.3	0.4	0.5	0.3
1980	0.3	1.1	1.9	1.4	0.6	0.6	0.3
1981	0.3	1.1	1.8	1.4	0.6	0.6	0.3
1982	0.4	1.3	2.2	1.6	0.6	0.7	0.4
1983	0.4	1.4	2.3	1.7	0.7	0.8	0.4
1984	0.3	1.2	2.0	1.5	0.6	0.6	0.4
1985	0.3	1.1	1.7	1.4	0.5	0.5	0.4
1986	0.3	1.2	2.0	1.4	0.5	0.5	0.3
1987	0.3	1.1	1.9	1.3	0.5	0.5	0.4
1988	0.3	1.0	1.8	1.2	0.5	0.5	0.3
1989	0.3	1.0	1.7	1.2	0.4	0.5	0.3
1990	0.3	1.0	1.5	1.2	0.4	0.5	0.3
1991	0.3	1.1	1.8	1.4	0.5	0.5	0.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 30-12 Standard errors of estimated percentages in table 30-6

Year	Total	Less than 12 years of school	Less than 9 years of school	9–11 years of school	12 years of school	1–3 years of college	4 or more years of college
1971	0.5	1.3	2.4	1.6	0.7	1.1	0.9
1972	0.4	1.2	2.2	1.5	0.6	1.0	0.7
1973	0.4	1.1	2.3	1.3	0.6	0.8	0.6
1974	0.4	1.2	2.3	1.4	0.5	0.8	0.6
1975	0.4	1.5	2.8	1.8	0.7	0.9	0.6
1976	0.4	1.3	2.5	1.6	0.6	0.9	0.6
1977	0.4	1.4	2.7	1.6	0.6	0.8	0.6
1978	0.3	1.4	2.5	1.6	0.6	0.6	0.5
1979	0.3	1.4	2.8	1.5	0.5	0.6	0.5
1980	0.3	1.4	2.9	1.6	0.6	0.7	0.4
1981	0.3	1.5	3.1	1.8	0.6	0.7	0.5
1982	0.4	1.6	3.3	1.9	0.6	0.7	0.5
1983	0.4	1.8	3.4	2.1	0.6	0.7	0.5
1984	0.3	1.6	3.1	1.9	0.6	0.7	0.4
1985	0.3	1.7	3.2	1.9	0.5	0.6	0.4
1986	0.3	1.6	2.8	1.9	0.5	0.6	0.4
1987	0.3	1.5	2.9	1.8	0.5	0.5	0.4
1988	0.3	1.4	2.5	1.7	0.4	0.5	0.4
1989	0.3	1.5	2.6	1.8	0.4	0.5	0.4
1990	0.3	1.5	2.6	1.8	0.5	0.5	0.3
1991	0.3	1.5	3.1	1.8	0.5	0.5	0.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Note on labor force statistics

The Bureau of Labor Statistics uses three categories to classify the labor force status of an individual: employed, unemployed, and not in the labor force.

An *employed* individual is someone with a job and working. Also included are those not working but with jobs from which they are temporarily absent because of illness, vacation, labor-management disputes, bad weather, and personal reasons. Those in the military are also counted as employed. An *unemployed* individual is someone without a job, available for work, and who has made specific efforts to find employment some time during the prior 4 weeks. Also included are persons waiting to be recalled to a job from which they had been laid off or are waiting to report to a new job within 30 days. Individuals who are neither employed nor unemployed are *not in the labor force.*

The *labor force* comprises all persons classified as employed or unemployed. The *unemployment rate* represents the number unemployed as a percent of the labor force. The *labor force participation rate* is the ratio of the labor force to the population. The *employment-population* ratio is the percentage of employed individuals in the population. We refer to the last statistic as the *employment rate* in *Indicator 30*.

Each of these statistics is typically reported in two forms, one that includes the military and one that excludes them. For instance, the *civilian employment-population ratio* is the percentage of all employed civilians in the civilian non-institutional population. The *civilian labor force participation rate* is the ratio of the civilian labor force to the civilian non-institutional population. The labor force statistics reported in *Indicator 30* and its associated supplemental tables are all for the civilian non-institutional population. *Indicator 30* reports the form that excludes the military.

Each of these measures can be computed for groups classified by age, sex, race, Hispanic origin, and so on.

Further elaboration on these labor force statistics is available in the explanatory notes of *Employment and Earnings,* published monthly by the Bureau of Labor Statistics of the U.S. Department of Labor.

Table 31-1 Ratio of median annual earnings of *male* wage and salary workers 25 to 34 years old with 9–11, 13–15, and 16 or more years of school to those with 12 years of school, by race/ethnicity: 1970–1990

Year	9–11 years of school			13–15 years of school			16 or more years of school		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
All wage and salary workers									
1970	0.87	0.78	0.91	1.07	1.32	(*)	1.21	(*)	(*)
1971	0.86	0.78	0.84	1.04	1.18	(*)	1.20	1.45	(*)
1972	0.85	0.75	0.79	1.01	1.16	1.00	1.16	1.43	(*)
1973	0.88	0.76	0.78	0.99	1.03	1.05	1.14	1.25	(*)
1974	0.85	0.75	0.74	1.02	1.01	0.98	1.14	1.11	(*)
1975	0.82	0.67	0.75	1.07	1.08	1.02	1.15	1.24	(*)
1976	0.80	0.80	0.89	1.03	1.08	0.98	1.16	1.47	(*)
1977	0.80	0.77	0.86	1.01	1.14	0.96	1.13	1.39	(*)
1978	0.79	0.74	0.81	1.01	1.33	1.00	1.13	1.46	1.26
1979	0.79	0.78	0.82	1.03	1.18	1.16	1.11	1.34	1.23
1980	0.77	0.76	0.92	1.03	1.17	1.22	1.16	1.35	1.29
1981	0.75	0.69	0.91	1.06	1.13	1.15	1.26	1.40	1.23
1982	0.72	0.77	0.74	1.12	1.04	1.13	1.30	1.51	1.46
1983	0.73	0.65	0.72	1.11	1.31	1.13	1.30	1.48	1.33
1984	0.62	0.65	0.77	1.11	1.22	1.12	1.30	1.64	1.28
1985	0.72	0.69	0.84	1.15	1.12	1.27	1.41	1.75	1.82
1986	0.69	0.87	0.83	1.15	1.32	1.27	1.43	1.69	1.79
1987	0.74	0.86	0.74	1.08	1.29	1.14	1.43	1.49	1.57
1988	0.73	0.56	0.70	1.08	1.11	1.10	1.42	1.37	1.30
1989	0.74	0.61	0.75	1.11	1.20	1.23	1.44	1.41	1.29
1990	0.73	0.72	0.77	1.13	1.26	1.31	1.42	1.66	1.67
Year-round, full-time wage and salary workers									
1970	0.89	0.81	0.92	1.10	1.25	(*)	1.25	(*)	(*)
1971	0.89	0.84	0.79	1.08	1.23	(*)	1.23	(*)	(*)
1972	0.88	0.82	0.87	1.06	1.16	(*)	1.20	1.41	(*)
1973	0.91	0.76	(*)	1.03	1.07	1.07	1.20	1.24	(*)
1974	0.89	0.80	(*)	1.04	1.01	0.99	1.20	1.14	(*)
1975	0.89	0.73	(*)	1.10	1.02	1.05	1.18	1.10	(*)
1976	0.88	0.80	0.90	1.08	1.09	1.09	1.19	1.31	(*)
1977	0.89	0.73	(*)	1.10	1.02	1.05	1.18	1.10	(*)
1978	0.82	0.73	0.78	1.02	1.19	0.93	1.12	1.26	(*)
1979	0.86	0.78	0.83	1.04	1.08	1.17	1.12	1.37	(*)
1980	0.87	0.68	0.92	1.05	1.07	1.18	1.18	1.21	1.24
1981	0.84	0.70	0.93	1.08	1.03	1.24	1.22	1.29	1.36
1982	0.83	0.78	0.77	1.09	1.04	1.07	1.21	1.34	1.34
1983	0.78	0.75	0.81	1.07	1.22	1.11	1.25	1.50	1.28
1984	0.78	0.75	0.86	1.08	1.24	1.08	1.23	1.49	1.26
1985	0.79	0.71	0.89	1.13	1.07	1.38	1.32	1.61	1.68
1986	0.80	0.75	0.85	1.15	1.17	1.13	1.39	1.46	1.60
1987	0.83	0.89	0.75	1.09	1.16	1.15	1.40	1.47	1.44
1988	0.82	0.82	0.77	1.15	1.24	1.08	1.39	1.31	1.30
1989	0.83	0.75	0.85	1.15	1.14	1.17	1.44	1.28	1.38
1990	0.81	0.80	0.87	1.13	1.32	1.25	1.35	1.58	1.67

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 31-2 **Ratio of median annual earnings of *female* wage and salary workers 25 to 34 years old with 9–11, 13–15, and 16 or more years of school to those with 12 years of school, by race/ethnicity: 1970–1990**

Year	9–11 years of school			13–15 years of school			16 or more years of school		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
All wage and salary workers									
1970	0.60	0.52	(*)	1.13	1.31	(*)	1.81	2.08	(*)
1971	0.64	0.64	(*)	1.09	1.44	(*)	1.84	2.13	(*)
1972	0.56	0.79	(*)	1.15	1.25	(*)	1.74	2.03	(*)
1973	0.69	0.70	(*)	1.25	1.38	(*)	1.80	1.84	(*)
1974	0.60	0.62	0.60	1.19	1.27	(*)	1.77	1.69	(*)
1975	0.64	0.60	(*)	1.24	1.28	(*)	1.75	1.69	(*)
1976	0.57	0.58	0.84	1.15	1.16	1.12	1.61	1.59	(*)
1977	0.59	0.63	0.76	1.24	1.20	1.13	1.53	1.63	(*)
1978	0.56	0.48	0.50	1.17	1.21	1.08	1.58	1.39	(*)
1979	0.71	0.65	0.67	1.21	1.24	1.14	1.57	1.50	(*)
1980	0.61	0.72	0.71	1.25	1.24	1.11	1.50	1.64	(*)
1981	0.60	0.56	0.75	1.24	1.22	1.25	1.55	1.57	1.53
1982	0.64	0.69	0.80	1.20	1.21	1.28	1.63	1.65	1.54
1983	0.65	0.65	0.69	1.26	1.10	1.35	1.68	1.59	1.72
1984	0.57	0.53	0.61	1.20	1.26	1.24	1.61	1.69	1.57
1985	0.60	0.65	0.73	1.19	1.17	1.11	1.66	1.78	1.72
1986	0.62	0.78	0.56	1.21	1.29	1.26	1.75	1.96	1.67
1987	0.72	0.55	0.68	1.22	1.33	1.37	1.74	1.92	1.86
1988	0.51	0.62	0.64	1.30	1.32	1.14	1.78	1.93	1.70
1989	0.64	0.50	0.72	1.30	1.45	1.28	1.89	2.05	2.03
1990	0.56	0.44	0.72	1.33	1.30	1.46	1.89	2.09	1.90
Year-round, full-time wage and salary workers									
1970	0.81	0.80	(*)	1.11	1.27	(*)	1.41	(*)	(*)
1971	0.81	0.75	(*)	1.13	(*)	(*)	1.43	1.44	(*)
1972	0.83	0.78	(*)	1.17	(*)	(*)	1.41	1.45	(*)
1973	0.89	0.73	(*)	1.20	1.15	(*)	1.44	1.50	(*)
1974	0.80	0.69	(*)	1.14	1.11	(*)	1.39	1.28	(*)
1975	0.77	0.74	(*)	1.14	1.12	(*)	1.38	1.27	(*)
1976	0.84	0.73	(*)	1.12	1.10	(*)	1.35	1.41	(*)
1977	0.77	0.74	(*)	1.14	1.12	(*)	1.38	1.27	(*)
1978	0.84	0.78	(*)	1.08	1.13	(*)	1.27	1.24	(*)
1979	0.83	0.87	(*)	1.12	1.19	(*)	1.30	1.31	(*)
1980	0.79	0.82	(*)	1.09	1.08	1.13	1.33	1.37	(*)
1981	0.75	(*)	(*)	1.15	1.09	1.23	1.39	1.32	(*)
1982	0.81	0.93	(*)	1.19	1.20	1.08	1.41	1.37	(*)
1983	0.77	(*)	(*)	1.21	1.19	1.20	1.39	1.36	1.37
1984	0.82	0.71	(*)	1.14	1.16	1.15	1.40	1.54	1.49
1985	0.79	(*)	(*)	1.16	1.15	1.18	1.46	1.49	1.48
1986	0.82	0.86	(*)	1.16	1.19	1.05	1.50	1.63	1.30
1987	0.77	(*)	(*)	1.15	1.29	1.17	1.46	1.54	1.50
1988	0.71	0.78	(*)	1.19	1.33	1.35	1.54	1.63	1.55
1989	0.75	(*)	0.70	1.20	1.22	1.21	1.59	1.60	1.64
1990	0.82	(*)	0.76	1.23	1.24	1.25	1.61	1.80	1.66

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 31-3 Median annual earnings of wage and salary workers 25 to 34 years old with 12 years of school, by sex and race/ethnicity: 1970–1990 (constant 1991 dollars)

Year	Male			Female		
	White	Black	Hispanic	White	Black	Hispanic
	All wage and salary workers					
1970	$ 29,991	$ 21,870	$ 26,140	$ 11,791	$ 21,870	$ 12,661
1971	30,177	22,409	24,926	12,401	22,409	11,946
1972	31,643	23,930	27,995	12,853	23,930	13,129
1973	31,950	25,599	26,049	12,359	25,599	13,703
1974	30,010	25,056	27,699	12,176	25,056	14,757
1975	27,887	22,831	24,589	12,093	22,831	13,303
1976	28,321	20,787	24,973	12,670	20,787	12,715
1977	29,046	21,037	23,575	13,066	21,037	13,175
1978	29,182	21,432	24,946	12,623	21,432	13,018
1979	28,712	20,669	22,378	13,011	20,669	13,186
1980	26,402	18,682	20,528	13,079	18,682	12,624
1981	24,598	18,473	19,858	12,567	18,473	13,306
1982	22,939	16,915	19,426	12,275	16,915	12,525
1983	23,250	16,089	20,122	12,381	16,089	11,939
1984	24,403	15,137	20,581	13,093	15,137	13,210
1985	23,415	17,193	17,848	13,360	17,193	12,895
1986	23,465	15,180	18,543	13,250	15,180	13,394
1987	24,005	15,270	19,304	13,584	15,270	13,187
1988	23,929	17,798	19,374	13,488	17,798	13,002
1989	23,286	16,888	17,987	12,953	16,888	12,564
1990	22,187	16,129	16,791	12,865	16,129	11,404
	Year-round, full-time wage and salary workers					
1970	$ 31,553	$ 24,593	$ 27,479	$ 19,702	$ 24,593	(*)
1971	31,766	25,008	28,109	19,143	25,008	(*)
1972	33,098	25,394	28,802	19,842	25,394	$19,954
1973	33,298	27,872	28,982	19,220	27,872	19,632
1974	31,531	28,280	30,053	18,857	28,280	19,256
1975	30,332	27,137	26,978	18,869	27,137	18,322
1976	30,430	25,404	27,455	19,324	25,404	18,473
1977	26,933	24,096	23,955	16,755	24,096	16,268
1978	31,919	26,767	29,398	19,461	26,767	18,468
1979	31,006	24,386	25,817	18,893	24,386	17,359
1980	28,639	22,700	23,897	18,579	22,700	17,685
1981	27,651	23,151	23,003	17,789	23,151	16,535
1982	26,925	21,410	23,027	17,423	21,410	17,162
1983	27,307	19,361	22,961	17,743	19,361	16,817
1984	27,843	18,626	24,411	18,333	18,626	17,233
1985	26,774	20,196	20,799	18,552	20,196	17,574
1986	26,535	20,060	22,752	18,311	20,060	19,353
1987	26,575	19,085	23,295	18,571	19,085	17,808
1988	26,108	19,491	22,698	18,334	19,491	17,204
1989	25,217	20,010	20,871	17,881	20,010	17,195
1990	24,858	17,886	19,397	17,469	17,886	15,257

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 31-4 Standard errors of estimated ratios in table 31-1

Year	9–11 years of school			13–15 years of school			16 or more years of school		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
	All wage and salary workers								
1970	0.02	0.06	0.06	0.02	0.12	(*)	0.03	(*)	(*)
1971	0.02	0.07	0.09	0.03	0.12	(*)	0.03	0.11	(*)
1972	0.02	0.07	0.07	0.02	0.09	0.12	0.02	0.14	(*)
1973	0.03	0.06	0.09	0.02	0.08	0.11	0.02	0.10	(*)
1974	0.03	0.09	0.07	0.02	0.09	0.10	0.02	0.12	(*)
1975	0.03	0.07	0.10	0.02	0.09	0.11	0.03	0.12	(*)
1976	0.03	0.09	0.09	0.02	0.10	0.13	0.02	0.16	(*)
1977	0.03	0.08	0.10	0.03	0.10	0.10	0.03	0.14	(*)
1978	0.03	0.06	0.12	0.03	0.12	0.09	0.03	0.15	0.20
1979	0.03	0.08	0.07	0.02	0.08	0.15	0.02	0.13	0.15
1980	0.03	0.04	0.07	0.02	0.08	0.11	0.02	0.11	0.16
1981	0.03	0.07	0.12	0.03	0.09	0.15	0.03	0.15	0.19
1982	0.03	0.08	0.09	0.03	0.09	0.12	0.03	0.13	0.14
1983	0.03	0.08	0.10	0.03	0.08	0.10	0.03	0.14	0.15
1984	0.03	0.05	0.08	0.03	0.12	0.12	0.04	0.12	0.13
1985	0.04	0.05	0.07	0.03	0.07	0.15	0.03	0.15	0.18
1986	0.04	0.06	0.08	0.03	0.10	0.12	0.03	0.14	0.17
1987	0.03	0.08	0.05	0.02	0.09	0.12	0.04	0.16	0.18
1988	0.03	0.05	0.04	0.03	0.07	0.10	0.04	0.06	0.13
1989	0.03	0.07	0.07	0.02	0.08	0.10	0.03	0.09	0.26
1990	0.03	0.05	0.09	0.04	0.08	0.08	0.03	0.08	0.15
	Year-round, full-time wage and salary workers								
1970	0.02	0.05	0.07	0.02	0.09	(*)	0.03	(*)	(*)
1971	0.02	0.10	0.08	0.02	0.10	(*)	0.02	(*)	(*)
1972	0.03	0.05	0.10	0.02	0.08	(*)	0.02	0.14	(*)
1973	0.03	0.06	(*)	0.02	0.09	0.11	0.03	0.10	(*)
1974	0.03	0.07	(*)	0.02	0.07	0.07	0.02	0.10	(*)
1975	0.03	0.08	(*)	0.03	0.07	0.11	0.03	0.11	(*)
1976	0.03	0.07	0.09	0.03	0.10	0.13	0.03	0.15	(*)
1977	0.03	0.08	(*)	0.03	0.07	0.11	0.03	0.11	(*)
1978	0.03	0.09	0.11	0.02	0.09	0.11	0.02	0.11	(*)
1979	0.04	0.06	0.08	0.02	0.07	0.11	0.02	0.13	(*)
1980	0.04	0.07	0.10	0.02	0.08	0.11	0.02	0.09	0.15
1981	0.03	0.06	0.09	0.03	0.07	0.14	0.03	0.10	0.21
1982	0.04	0.11	0.08	0.02	0.08	0.11	0.03	0.11	0.12
1983	0.03	0.11	0.10	0.02	0.09	0.09	0.03	0.12	0.09
1984	0.03	0.06	0.08	0.03	0.11	0.10	0.02	0.10	0.19
1985	0.03	0.06	0.10	0.03	0.06	0.13	0.04	0.08	0.13
1986	0.03	0.06	0.07	0.03	0.08	0.10	0.03	0.13	0.15
1987	0.03	0.07	0.07	0.03	0.10	0.10	0.02	0.12	0.10
1988	0.03	0.09	0.07	0.03	0.08	0.07	0.03	0.12	0.11
1989	0.03	0.05	0.05	0.03	0.07	0.13	0.04	0.08	0.19
1990	0.04	0.06	0.05	0.03	0.07	0.10	0.03	0.07	0.13

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 31-5 Standard errors of estimated ratios in table 31-2

Year	9–11 years of school			13–15 years of school			16 or more years of school		
	White	Black	Hispanic	White	Black	Hispanic	White	Black	Hispanic
				All wage and salary workers					
1970	0.07	0.08	(*)	0.12	0.18	(*)	0.12	0.22	(*)
1971	0.06	0.14	(*)	0.10	0.23	(*)	0.11	0.25	(*)
1972	0.06	0.11	(*)	0.09	0.17	(*)	0.09	0.20	(*)
1973	0.07	0.08	(*)	0.08	0.14	(*)	0.09	0.23	(*)
1974	0.06	0.08	0.20	0.06	0.13	(*)	0.08	0.15	(*)
1975	0.06	0.07	(*)	0.07	0.15	(*)	0.08	0.13	(*)
1976	0.06	0.08	0.15	0.06	0.10	0.20	0.07	0.16	(*)
1977	0.06	0.10	0.15	0.06	0.09	0.25	0.06	0.14	(*)
1978	0.05	0.07	0.14	0.05	0.09	0.21	0.06	0.11	(*)
1979	0.07	0.07	0.13	0.05	0.11	0.20	0.05	0.11	(*)
1980	0.06	0.11	0.13	0.05	0.09	0.22	0.05	0.13	(*)
1981	0.05	0.07	0.13	0.04	0.09	0.14	0.06	0.15	0.19
1982	0.05	0.09	0.13	0.04	0.09	0.14	0.06	0.11	0.21
1983	0.06	0.05	0.16	0.05	0.08	0.17	0.05	0.09	0.25
1984	0.05	0.13	0.12	0.04	0.08	0.14	0.04	0.12	0.20
1985	0.06	0.07	0.12	0.04	0.08	0.13	0.05	0.13	0.22
1986	0.04	0.08	0.15	0.05	0.11	0.15	0.05	0.16	0.18
1987	0.05	0.07	0.10	0.04	0.11	0.14	0.05	0.10	0.15
1988	0.05	0.07	0.12	0.04	0.11	0.15	0.04	0.10	0.21
1989	0.06	0.10	0.10	0.04	0.10	0.14	0.04	0.13	0.20
1990	0.05	0.08	0.11	0.04	0.11	0.12	0.05	0.15	0.20
				All wage and salary workers					
1970	0.04	0.09	(*)	0.04	0.13	(*)	0.04	(*)	(*)
1971	0.04	0.08	(*)	0.05	(*)	(*)	0.04	0.11	(*)
1972	0.05	0.08	(*)	0.04	(*)	(*)	0.04	0.12	(*)
1973	0.05	0.09	(*)	0.04	0.07	(*)	0.04	0.14	(*)
1974	0.05	0.09	(*)	0.04	0.12	(*)	0.04	0.10	(*)
1975	0.05	0.12	(*)	0.03	0.06	(*)	0.04	0.07	(*)
1976	0.06	0.04	(*)	0.03	0.06	(*)	0.03	0.11	(*)
1977	0.05	0.12	(*)	0.03	0.06	(*)	0.04	0.07	(*)
1978	0.05	0.08	(*)	0.03	0.08	(*)	0.03	0.09	(*)
1979	0.05	0.10	(*)	0.03	0.08	(*)	0.04	0.09	(*)
1980	0.05	0.12	(*)	0.02	0.06	0.15	0.03	0.10	(*)
1981	0.04	(*)	(*)	0.03	0.06	0.14	0.03	0.09	(*)
1982	0.06	0.07	(*)	0.03	0.08	0.13	0.03	0.06	(*)
1983	0.06	(*)	(*)	0.04	0.08	0.14	0.04	0.07	0.13
1984	0.05	0.05	(*)	0.03	0.05	0.10	0.04	0.12	0.16
1985	0.05	(*)	(*)	0.03	0.07	0.15	0.03	0.10	0.21
1986	0.04	0.06	(*)	0.03	0.08	0.07	0.03	0.11	0.10
1987	0.04	(*)	(*)	0.03	0.08	0.10	0.04	0.08	0.13
1988	0.03	0.15	(*)	0.04	0.10	0.18	0.04	0.09	0.16
1989	0.05	(*)	0.08	0.03	0.08	0.15	0.03	0.11	0.18
1990	0.06	(*)	0.08	0.03	0.10	0.12	0.03	0.11	0.17

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 31-6 Standard error of estimated median earnings in table 31-3

Year	Male			Female		
	White	Black	Hispanic	White	Black	Hispanic
			All wage and salary workers			
1970	$ 340	$ 959	$ 1,344	$ 486	$ 959	$ 2,667
1971	377	958	1,553	484	958	1,787
1972	349	683	1,291	508	683	1,703
1973	374	1,189	1,887	471	1,189	1,101
1974	355	1,237	3,363	375	1,237	1,982
1975	368	1,043	1,841	448	1,043	1,037
1976	350	1,171	1,714	408	1,171	1,323
1977	465	1,238	1,714	391	1,238	1,266
1978	565	1,333	1,970	348	1,333	1,123
1979	386	871	1,136	376	871	1,151
1980	321	729	1,373	333	729	1,256
1981	352	936	1,538	306	936	761
1982	339	655	1,569	347	655	922
1983	339	570	1,401	310	570	984
1984	440	604	1,087	283	604	920
1985	418	630	1,062	257	630	966
1986	402	527	1,285	236	527	967
1987	370	807	1,100	247	807	820
1988	312	539	912	252	539	882
1989	257	663	755	249	663	642
1990	285	426	822	248	426	652
			Year-round, full-time wage and salary workers			
1970	$372	$ 924	$1,405	$391	$ 924	(*)
1971	353	1,199	2,449	327	1,199	(*)
1972	401	777	1,473	435	777	$1,799
1973	368	1,484	1,529	419	1,484	2,189
1974	356	1,244	1,485	357	1,244	1,096
1975	371	1,241	1,729	320	1,241	1,199
1976	478	1,357	1,679	358	1,357	1,448
1977	329	1,102	1,536	284	1,102	1,064
1978	413	1,670	2,480	385	1,670	1,384
1979	384	1,170	2,529	295	1,170	1,280
1980	336	1,294	1,768	240	1,294	988
1981	421	878	1,627	238	878	915
1982	452	1,007	1,121	261	1,007	1,400
1983	407	951	1,261	367	951	1,173
1984	339	873	1,942	364	873	1,134
1985	354	653	1,115	349	653	1,877
1986	335	1,119	1,084	338	1,119	837
1987	319	923	1,289	258	923	1,187
1988	403	536	1,354	283	536	1,000
1989	440	692	1,181	237	692	1,232
1990	477	414	779	240	414	984

*Too few sample observations for a reliable estimate.

SOURCE: U.S. Department of Commerce, Bureau of the Census, March Current Population Survey.

Table 32-1 Standard errors for estimated percentages and ratios in text table for *Indicator 32*

Type of election and year	1-3 years high school	4 years high school	1-3 years college	4 or more years college
		Voting rates		
Congressional elections				
1974	0.8	0.5	0.8	0.8
1982	1.0	0.6	0.9	0.8
1990	0.8	0.5	0.7	0.6
Presidential elections				
1964	1.3	0.9	1.4	1.2
1976	0.9	0.5	0.8	0.6
1988	1.1	0.6	0.7	0.6
		Ratio of voting rates to that of high school graduates*		
Congressional elections				
1974	0.02	--	0.03	0.03
1982	0.03	--	0.03	0.04
1990	0.02	--	0.03	0.03
Presidential elections				
1964	0.02	--	0.02	0.02
1976	0.02	--	0.02	0.02
1988	0.02	--	0.02	0.02

--Not applicable.

*High school graduates are defined here as those completing 4 years of high school.

NOTE: The voting rate for the 25-44 year old population is calculated as the number of voters aged 25-44 divided by the total number of persons aged 25-44. The total number of persons includes non-U.S. as well as U.S. citizens.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "Voting and Registration in the Election of November .....," Current Population Reports, Series P-20, Nos. 143, 293, 322, 383, 440, 453.

Table 33-1 Standard errors for estimated percentages in text table for *Indicator 33*

Year	Pre-K					Kindergarten				
	Percent private	Percent full day	Percent minority			Percent private	Percent full day	Percent minority		
			Total*	Black	Hispanic			Total*	Black	Hispanic
1973	1.6	1.6	1.5	1.3	0.8	0.9	0.9	0.9	0.8	0.5
1974	1.4	1.5	1.3	1.1	0.7	0.8	0.9	0.9	0.8	0.6
1975	1.5	1.5	1.3	1.1	0.7	0.8	0.9	0.9	0.8	0.6
1976	1.5	1.5	1.3	1.2	0.7	0.8	0.9	0.9	0.8	0.6
1977	1.5	1.5	1.3	1.2	0.7	0.9	1.0	1.0	0.8	0.6
1978	1.4	1.5	1.3	1.1	0.7	0.9	1.1	1.0	0.9	0.6
1979	1.4	1.4	1.1	1.1	-	0.8	1.1	0.9	0.9	-
1980	1.4	1.4	1.2	1.0	0.8	0.8	1.1	1.0	0.8	0.6
1981	1.3	1.3	1.2	1.0	0.7	0.9	1.1	1.0	0.8	0.7
1982	1.5	1.5	1.2	1.1	0.6	1.0	1.2	1.1	0.9	0.8
1983	1.5	1.4	1.2	1.1	0.6	1.0	1.2	1.1	0.9	0.8
1984	1.4	1.5	1.2	1.1	0.7	0.9	1.2	1.1	0.9	0.7
1985	1.4	1.4	1.2	1.0	0.8	0.9	1.2	1.1	0.9	0.7
1986	1.4	1.4	1.2	1.0	0.8	0.9	1.2	1.1	0.9	0.8
1987	1.4	1.4	1.2	0.9	0.8	0.8	1.1	1.1	0.9	0.7
1988	1.6	1.6	1.3	1.1	0.8	1.0	1.4	1.3	1.0	0.9
1989	1.6	1.6	1.3	1.1	0.8	1.0	1.4	1.3	1.0	0.9
1990	1.5	1.5	1.2	1.0	0.8	1.0	1.4	1.3	1.1	0.9

-Not applicable.

* Includes only black and Hispanic 3- to 6-year-olds.

NOTE: Pre-K and kindergarten enrollment does not include those below 3 years of age. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 34-1 Enrollment in kindergarten through grade 8 (K–8) and grades 9–12 of public and private elementary/secondary schools, with projections: Fall 1970 to fall 2002 (in thousands)

Year	Public schools			Private schools[1]		
	Grades K-12[2]	Grades K-8[2]	Grades 9-12	Grades K-12[2]	Grades K-8[2]	Grades 9-12
1970	45,894	32,558	13,336	5,363	4,052	1,311
1971	46,071	32,318	13,753	[3]5,200	[3]3,900	[3]1,300
1972	45,726	31,879	13,848	[3]5,000	[3]3,700	[3]1,300
1973	45,445	31,401	14,044	[3]5,000	[3]3,700	[3]1,300
1974	45,073	30,971	14,103	[3]5,000	[3]3,700	[3]1,300
1975	44,819	30,515	14,304	[3]5,000	[3]3,700	[3]1,300
1976	44,311	29,997	14,314	5,167	3,825	1,342
1977	43,577	29,375	14,203	5,140	3,797	1,343
1978	42,551	28,463	14,088	5,086	3,732	1,353
1979	41,651	28,034	13,616	[3]5,000	[3]3,700	[3]1,300
1980	40,877	27,647	13,231	5,331	3,992	1,339
1981	40,044	27,280	12,764	[3]5,500	[3]4,100	[3]1,400
1982	39,566	27,161	12,405	[3]5,600	[3]4,200	[3]1,400
1983	39,252	26,981	12,271	5,715	4,315	1,400
1984	39,208	26,905	12,304	[3]5,700	[3]4,300	[3]1,400
1985	39,422	27,034	12,388	5,557	4,195	1,362
1986	39,753	27,420	12,333	[3]5,452	[3]4,116	[3]1,336
1987	40,008	27,931	12,077	5,479	4,232	1,247
1988	40,189	28,499	11,690	5,241	4,036	1,206
1989	40,526	29,149	11,377	5,355	4,162	1,193
1990[4]	41,026	29,742	11,284	5,195	4,066	1,129
Projected						
1991	41,575	30,186	11,389	5266	4127	1140
1992	42,250	30,663	11,587	5351	4192	1159
1993	42,971	31,091	11,880	5439	4250	1189
1994	43,749	31,451	12,298	5530	4300	1230
1995	44,442	31,782	12,660	5612	4345	1267
1996	45,074	32,068	13,006	5685	4384	1301
1997	45,585	32,343	13,242	5746	4422	1325
1998	45,955	32,661	13,294	5795	4465	1330
1999	46,276	32,843	13,433	5834	4490	1344
2000	46,539	33,032	13,507	5867	4516	1351
2001	46,782	33,172	13,610	5897	4535	1362
2002	47,068	33,245	13,823	5928	4545	1383

[1] Beginning in Fall 1980, data include estimates for expanded universe for private schools.

[2] Includes kindergarten and some nursery school enrollment.

[3] Estimated by NCES.

[4] Based on Early Estimates.

NOTE: Projections are based on data through 1988. Because of rounding, details might not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Historical Trends: State Education Facts, 1992*; Common Core of Data; *Digest of Education Statistics 1991*, table 3; *Projections of Education Statistics to 2002*, table 1; *Early Estimates for Public and Private Elementary and Secondary education, School Year 1990–91.*

Table 35-1 Total and full-time-equivalent (FTE) enrollment in higher education, by type and control of institution: Fall 1972–fall 1990

Year	All institutions	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
Total enrollment					
1972	9,214,860	4,429,696	2,640,939	2,028,978	115,247
1973	9,602,123	4,529,895	2,889,621	2,062,179	120,428
1974	10,223,729	4,703,018	3,285,482	2,116,717	118,512
1975	11,184,859	4,998,142	3,836,366	2,216,598	133,753
1976	11,012,137	4,901,691	3,751,786	2,227,125	131,535
1977	11,285,787	4,945,224	3,901,769	2,297,621	141,173
1978	11,260,092	4,912,203	3,873,690	2,319,748	154,451
1979	11,569,899	4,980,012	4,056,810	2,373,221	159,856
1980	12,096,895	5,128,612	4,328,782	2,441,996	197,505
1981	12,371,672	5,166,324	4,480,708	2,489,137	235,503
1982	12,425,780	5,176,434	4,519,653	2,477,640	252,053
1983	12,464,661	5,223,404	4,459,330	2,517,791	264,136
1984	12,241,940	5,198,273	4,279,097	2,512,894	251,676
1985	12,247,055	5,209,540	4,269,733	2,506,438	261,344
1986	12,503,511	5,300,202	4,413,691	2,523,761	265,857
1987	12,766,642	5,432,200	4,541,054	2,558,220	235,168
1988	13,055,337	5,545,901	4,615,487	2,634,281	259,668
1989[1]	13,538,560	5,694,303	4,883,660	2,693,368	267,229
1990[2]	13,710,150	5,802,877	4,937,663	2,726,255	243,355
Full-time-equivalent (FTE) enrollment					
1972	7,253,739	3,706,239	1,746,609	1,700,582	100,309
1973	7,453,448	3,721,031	1,908,524	1,718,187	105,706
1974	7,805,453	3,847,550	2,097,254	1,758,699	101,950
1975	8,479,685	4,056,500	2,465,810	1,843,901	113,474
1976	8,312,502	3,998,450	2,351,453	1,849,551	113,048
1977	8,415,339	4,039,071	2,357,405	1,896,005	122,858
1978	8,348,482	3,996,126	2,283,073	1,936,447	132,836
1979	8,487,317	4,059,304	2,333,313	1,956,768	137,932
1980	8,819,013	4,158,267	2,484,027	2,003,105	173,614
1981	9,014,521	4,208,506	2,572,794	2,041,341	191,880
1982	9,091,648	4,220,648	2,629,941	2,028,275	212,784
1983	9,166,399	4,265,808	2,615,672	2,059,415	225,504
1984	8,951,695	4,237,895	2,446,769	2,054,816	212,215
1985	8,943,433	4,239,622	2,428,159	2,054,717	220,935
1986	9,064,168	4,295,495	2,482,551	2,064,829	221,293
1987	9,229,736	4,395,731	2,541,958	2,090,779	201,267
1988	9,466,878	4,505,501	2,591,571	2,159,770	210,036
1989[1]	9,780,881	4,619,828	2,751,762	2,193,774	215,517
1990[2]	9,919,107	4,706,752	2,791,171	2,224,022	197,162

[1] Data have been revised from previously published figures.

[2] Preliminary data.

NOTE: Large increases in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics* 1991, tables 162 and 188 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

Table 35-2 Index of total and full-time-equivalent enrollment (1981=100) in higher education, by type and control of institution: Fall 1972–fall 1990

Fall of year	All institution	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
		Total enrollment			
1972	74.5	85.7	58.9	81.5	48.9
1973	77.6	87.7	64.5	82.8	51.1
1974	82.6	91.0	73.3	85.0	50.3
1975	90.4	96.7	85.6	89.1	56.8
1976	89.0	94.9	83.7	89.5	55.9
1977	91.2	95.7	87.1	92.3	59.9
1978	91.0	95.1	86.5	93.2	65.6
1979	93.5	96.4	90.5	95.3	67.9
1980	97.8	99.3	96.6	98.1	83.9
1981	100.0	100.0	100.0	100.0	100.0
1982	100.4	100.2	100.9	99.5	107.0
1983	100.8	101.1	99.5	101.2	112.2
1984	99.0	100.6	95.5	101.0	106.9
1985	99.0	100.8	95.3	100.7	111.0
1986	101.1	102.6	98.5	101.4	112.9
1987	103.2	105.1	101.3	102.8	99.9
1988	105.5	107.3	103.0	105.8	110.3
1989	109.4	110.2	109.0	108.2	113.5
1990[1]	110.8	112.3	110.2	109.5	103.3
		Full-time-equivalent (FTE) enrollment			
1972	80.5	88.1	67.9	83.3	52.3
1973	82.7	88.4	74.2	84.2	55.1
1974	86.6	91.4	81.5	86.2	53.1
1975	94.1	96.4	95.8	90.3	59.1
1976	92.2	95.0	91.4	90.6	58.9
1977	93.4	96.0	91.6	92.9	64.0
1978	92.6	95.0	88.7	94.9	69.2
1979	94.2	96.5	90.7	95.9	71.9
1980	97.8	98.8	96.5	98.1	90.5
1981	100.0	100.0	100.0	100.0	100.0
1982	100.9	100.3	102.2	99.4	110.9
1983	101.7	101.4	101.7	100.9	117.5
1984	99.3	100.7	95.1	100.7	110.6
1985	99.2	100.7	94.4	100.7	115.1
1986	100.6	102.1	96.5	101.2	115.3
1987	102.4	104.4	98.8	102.4	104.9
1988	105.0	107.1	100.7	105.8	109.5
1989	108.5	109.8	107.0	107.5	112.3
1990*	110.0	111.8	108.5	108.9	102.8

*Preliminary data.

NOTE: Increases in enrollments in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics *Digest of Education Statistics* 1991, tables 162 and 188 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

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Table 35-3 Percentage of total and full-time-equivalent enrollment in higher education, by type and control of institution: Fall 1972–fall 1990

Fall of year	Total	Public, 4-year	Public, 2-year	Private, 4-year	Private, 2-year
		Total enrollment			
1972	100.0	48.1	28.7	22.0	1.3
1973	100.0	47.2	30.1	21.5	1.3
1974	100.0	46.0	32.1	20.7	1.2
1975	100.0	44.7	34.3	19.8	1.2
1976	100.0	44.5	34.1	20.2	1.2
1977	100.0	43.8	34.6	20.4	1.3
1978	100.0	43.6	34.4	20.6	1.4
1979	100.0	43.0	35.1	20.5	1.4
1980	100.0	42.4	35.8	20.2	1.6
1981	100.0	41.8	36.2	20.1	1.9
1982	100.0	41.7	36.4	19.9	2.0
1983	100.0	41.9	35.8	20.2	2.1
1984	100.0	42.5	35.0	20.5	2.1
1985	100.0	42.5	34.9	20.5	2.1
1986	100.0	42.4	35.3	20.2	2.1
1987	100.0	42.5	35.6	20.0	1.8
1988	100.0	42.5	35.4	20.2	2.0
1989[1]	100.0	42.1	36.1	19.9	2.0
1990[2]	100.0	42.3	36.0	19.9	1.8
		Full-time-equivalent (FTE) enrollment			
1972	100.0	51.1	24.1	23.4	1.4
1973	100.0	49.9	25.6	23.1	1.4
1974	100.0	49.3	26.9	22.5	1.3
1975	100.0	47.8	29.1	21.7	1.3
1976	100.0	48.1	28.3	22.3	1.4
1977	100.0	48.0	28.0	22.5	1.5
1978	100.0	47.9	27.3	23.2	1.6
1979	100.0	47.8	27.5	23.1	1.6
1980	100.0	47.2	28.2	22.7	2.0
1981	100.0	46.7	28.5	22.6	2.1
1982	100.0	46.4	28.9	22.3	2.3
1983	100.0	46.5	28.5	22.5	2.5
1984	100.0	47.3	27.3	23.0	2.4
1985	100.0	47.4	27.2	23.0	2.5
1986	100.0	47.4	27.4	22.8	2.4
1987	100.0	47.6	27.5	22.7	2.2
1988	100.0	47.6	27.4	22.8	2.2
1989[1]	100.0	47.2	28.1	22.4	2.2
1990[2]	100.0	47.5	28.1	22.4	2.0

[1] Preliminary data.

[2] Data have been revised from previously published figures.

NOTE: Increases in private 2-year institutions in 1980 and 1981 reflect the addition of schools accredited by the National Association of Trade and Technical Schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics* 1991, tables 162 and 188 and unpublished tabulations (based on the IPEDS/HEGIS surveys of fall enrollment, various years).

Table 35-4 High school graduates, by age: 1972–1990

Year	Number (in thousands)		Index (1981=100)	
	20-24	25-34	20-24	25-34
1972	14,256	20,459	81.6	63.1
1973	14,713	21,695	84.2	67.0
1974	14,932	23,195	85.4	71.6
1975	15,468	24,390	88.5	75.3
1976	15,825	25,774	90.6	79.6
1977	16,102	26,919	92.1	83.1
1978	16,403	27,822	93.9	85.9
1979	16,754	28,849	95.9	89.0
1980	17,333	31,259	99.2	96.5
1981	17,475	32,399	100.0	100.0
1982	17,667	33,397	101.1	103.1
1983	17,775	33,976	101.7	104.9
1984	17,750	34,757	101.6	107.3
1985	17,110	35,465	97.9	109.5
1986	16,855	36,510	96.5	112.7
1987	16,389	36,891	93.8	113.9
1988*	16,055	37,118	91.9	114.6
1989	15,522	37,427	88.8	115.5
1990	15,168	37,282	86.8	115.1

* Revised from previously published figures.

NOTE: High school graduates are those who have completed 4 or more years of high school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports, Series P-20. Education Attainment in the United States: March.....,"* various years and unpublished tabulations.

Table 36-1 Number of degrees conferred, by level of degree, and number of high school graduates: Academic years ending 1971–1990

Year	Degrees					High school completers[2]
	Associate's	Bachelor's	Master's	Doctor's	First-professional[1]	
1971	252,610	839,730	230,509	32,107	37,946	—
1972	292,119	887,273	251,633	33,363	43,411	—
1973	316,174	922,362	263,371	34,777	50,018	—
1974	343,924	945,776	277,033	33,816	53,816	3,367,000
1975	360,171	922,933	292,450	34,083	55,916	3,473,000
1976	391,454	925,746	311,771	34,064	62,649	3,481,000
1977	406,377	919,549	317,164	33,232	64,359	3,487,000
1978	412,246	921,204	311,620	32,131	66,581	3,508,000
1979	402,702	921,390	301,079	32,730	68,848	3,543,000
1980	400,910	929,417	298,081	32,615	70,131	3,522,000
1981	416,377	935,140	295,739	32,958	71,956	3,509,000
1982	434,515	952,998	295,546	32,707	72,032	3,481,000
1983	456,441	969,510	289,921	32,775	73,136	3,353,000
1984	452,416	974,309	284,263	33,209	74,407	3,194,000
1985	454,712	979,477	286,251	32,943	75,063	3,090,000
1986	446,047	987,823	288,567	33,653	73,910	3,071,000
1987	437,137	991,339	289,557	34,120	72,750	3,138,000
1988	435,537	993,362	298,733	34,839	70,415	3,183,000
1989[3]	436,764	1,018,755	310,621	35,720	70,856	3,081,000
1990[4]	454,679	1,049,657	323,844	38,238	70,980	3,001,000

—Not available.

[1] The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

[2] High school completers are the graduates of regular public and private day school programs and the recipients of GED credentials. Data for GED recipients are not available before 1974.

[3] Degree data are revised from previously published figures.

[4] Preliminary.

NOTE: The number of high school completers reported here differs from the numbers shown in *Indicator 24* because of differences in definition and surveys used.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1991*, tables 95, 97, and 228 and unpublished tabulations (based on National Center for Education Statistics, IPEDS/HEGIS surveys of degrees conferred and Common Core of Data; American Council of Education, annual GED survey).

Table 37-1 Enrollment in public elementary and secondary education, by race/ethnicity: 1976, 1984, 1986, and 1988

Race/ethnicity	1976	1984	1986	1988	Percent change 1976–88
			(In thousands)		
Total	43,714	39,452	41,156	40,484	-7.4
White, non-Hispanic	33,229	28,106	28,957	28,628	-13.8
Total minority	10,485	11,346	12,200	11,857	13.1
Black, non-Hispanic	6,774	6,389	6,622	6,158	-9.1
Hispanic	2,807	3,599	4,064	4,071	45.0
Asain/Pacific Islander	535	994	1,158	1,267	136.8
American Indian/Alaskan Native	368	364	356	361	-1.9
			Percent		
Total	100.0	100.0	100.0	100.0	—
White, non-Hispanic	76.0	71.2	70.4	70.7	—
Total minority	24.0	28.8	29.6	29.3	—
Black, non-Hispanic	15.5	16.2	16.1	15.2	—
Hispanic	6.4	9.1	9.9	10.1	—
Asain/Pacific Islander	1.2	2.5	2.8	3.1	—
American Indian/Alaskan Native	0.8	0.9	0.9	0.9	—

— Not applicable.

SOURCE: U.S. Department of Education, Office for Civil Rights, *Directory of Elementary and Secondary School Districts and Schools in Selected Districts: 1976–77, 1984; 1986* and 1988 Elementary and Secondary School Civil Rights Survey, unpublished tabulations.

Table 37-2 Standard errors for estimated percentages in text table for *Indicator 37*

Year	Black				Hispanic				Black or Hispanic			
	Public schools			Private schools	Public schools			Private schools	Public schools			Private schools
	Central cities	Other metro-politan	Non-metro-politan		Central cities	Other metro-politan	Non-metro-politan		Central cities	Other metro-politan	Non-metro-politan	
1970	0.8	0.3	0.4	0.5	—	—	—	—	—	—	—	—
1971	0.8	0.3	0.4	0.5	—	—	—	—	—	—	—	—
1972	0.7	0.3	0.4	0.5	0.5	0.3	0.3	0.5	0.8	0.4	0.5	0.7
1973	0.7	0.3	0.4	0.6	0.5	0.3	0.3	0.5	0.8	0.4	0.5	0.8
1974	0.7	0.3	0.5	0.5	0.5	0.3	0.3	0.7	0.8	0.4	0.5	0.8
1975	0.8	0.3	0.5	0.5	0.5	0.3	0.3	0.6	0.8	0.4	0.5	0.8
1976	0.8	0.4	0.5	0.6	0.5	0.3	0.3	0.6	0.8	0.5	0.5	0.8
1977	0.8	0.3	0.5	0.6	0.5	0.3	0.2	0.6	0.8	0.4	0.5	0.8
1978	0.8	0.4	0.5	0.6	0.6	0.3	0.2	0.6	0.9	0.5	0.5	0.8
1979	0.8	0.4	0.4	0.7	0.6	0.3	0.3	0.6	0.9	0.5	0.5	0.9
1980	—	—	—	—	—	—	—	—	—	—	—	—
1981	0.8	0.4	0.5	0.6	0.6	0.4	0.3	0.7	0.9	0.5	0.5	0.9
1982	0.8	0.4	0.5	0.6	0.7	0.4	0.3	0.7	0.9	0.5	0.5	0.9
1983	0.8	0.4	0.5	0.6	0.7	0.4	0.3	0.7	0.9	0.5	0.5	0.9
1984	—	—	—	0.7	—	—	—	0.6	—	—	—	0.9
1985	0.9	0.4	0.5	0.6	0.7	0.4	0.3	0.6	0.9	0.5	0.6	0.8
1986	0.8	0.4	0.6	0.7	0.7	0.4	0.3	0.7	0.8	0.5	0.7	0.9
1987	0.8	0.4	0.6	0.7	0.6	0.4	0.3	0.7	0.8	0.5	0.6	0.9
1988	0.8	0.4	0.6	0.8	0.6	0.4	0.4	0.7	0.8	0.5	0.6	1.0
1989	0.8	0.4	0.5	0.8	0.7	0.4	0.3	0.7	0.8	0.5	0.6	1.0

— Not available.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Reports, Series P-20, "School Enrollment ...," various years (based on October Current Population Survey).

Table 38-1 Total enrollment in institutions of higher education, by control of institution, type of institution, and race/ethnicity of student: Fall, selected years 1976–1990

Control and type of institution, and race/ethnicity of student	Number, in thousands							
	1976	1978	1980	1982	1984	1986	1988	1990
All institutions	10,986	11,231	12,087	12,388	12,235	12,504	13,043	13,710
White	9,076	9,194	9,833	9,997	9,815	9,921	10,283	10,675
Minority	1,691	1,785	1,949	2,059	2,085	2,238	2,399	2,639
Black	1,033	1,054	1,107	1,101	1,076	1,082	1,130	1,223
Hispanic	384	417	472	519	535	618	680	758
Asian or Pacific Islander	198	235	286	351	390	448	497	555
American Indian/Alaskan Native	76	78	84	88	84	90	93	103
Nonresident alien	219	253	305	331	335	345	361	397
Public institutions	8,641	8,770	9,456	9,695	9,458	9,714	10,156	10,741
White	7,095	7,136	7,656	7,785	7,543	7,654	7,964	8,340
Minority	1,401	1,466	1,596	1,692	1,696	1,836	1,955	2,136
Black	831	840	876	873	844	854	881	952
Hispanic	337	363	406	446	456	532	587	648
Asian or Pacific Islander	166	195	240	296	323	371	406	445
American Indian/Alaskan Native	68	68	74	77	72	79	81	90
Nonresident alien	145	167	204	219	219	224	238	265
Private institutions	2,345	2,461	2,630	2,693	2,777	2,790	2,887	2,970
White	1,982	2,058	2,177	2,212	2,272	2,267	2,319	2,335
Minority	290	319	353	368	389	403	444	503
Black	202	215	231	228	232	228	248	271
Hispanic	47	55	66	74	79	86	93	110
Asian or Pacific Islander	32	40	47	55	67	77	91	110
American Indian/Alaskan Native	9	9	10	10	11	11	11	12
Nonresident alien	73	85	101	113	116	120	123	132
4-year institutions	7,107	7,203	7,565	7,648	7,708	7,824	8,175	8,529
White	5,999	6,027	6,275	6,306	6,301	6,337	6,582	6,757
Minority	931	975	1,050	1,073	1,124	1,195	1,292	1,450
Black	604	612	634	612	617	615	656	715
Hispanic	174	190	217	229	246	278	296	345
Asian or Pacific Islander	119	138	162	193	223	262	297	343
American Indian/Alaskan Native	35	35	37	39	38	40	42	48
Nonresident alien	177	201	241	270	282	292	302	322
2-year institutions	3,879	4,028	4,521	4,740	4,527	4,680	4,868	5,181
White	3,077	3,167	3,558	3,692	3,514	3,584	3,702	3,918
Minority	760	810	899	987	961	1,043	1,107	1,189
Black	429	443	472	489	459	467	473	509
Hispanic	210	227	255	291	289	340	384	414
Asian or Pacific Islander	79	97	124	158	167	186	199	212
American Indian/Alaskan Native	41	43	47	49	46	51	50	54
Nonresident alien	42	52	64	61	53	53	60	75

NOTE: Because of underreporting and nonreporting of racial/ethnic data, figures are slightly lower than corresponding data in other tables. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991, table 194 and unpublished tabulations (based on the IPEDS/HEGIS survey of fall enrollment in postsecondary and higher education, various years).*

Table 38-2 Percentage distribution of total enrollment in institutions of higher education by control of institution, type of institution, and race/ethnicity of student: Fall, selected years 1976–1990

Control and type of institution, and race/ethnicity of student	1976	1978	1980	1982	1984	1986	1988	1990
All institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	82.6	81.9	81.4	80.7	80.2	79.3	78.8	77.9
Minority	15.4	15.9	16.1	16.6	17.0	17.9	18.4	19.2
Black	9.4	9.4	9.2	8.9	8.8	8.7	8.7	8.9
Hispanic	3.5	3.7	3.9	4.2	4.4	4.9	5.2	5.5
Asian or Pacific Islander	1.8	2.1	2.4	2.8	3.2	3.6	3.8	4.0
American Indian/Alaskan Native	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Nonresident alien	2.0	2.2	2.5	2.7	2.7	2.8	2.8	2.9
Public institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	82.1	81.4	81.0	80.3	79.8	78.8	78.4	77.6
Minority	16.2	16.7	16.9	17.4	17.9	18.9	19.2	19.9
Black	9.6	9.6	9.3	9.0	8.9	8.8	8.7	8.9
Hispanic	3.9	4.1	4.3	4.6	4.8	5.5	5.8	6.0
Asian or Pacific Islander	1.9	2.2	2.5	3.0	3.4	3.8	4.0	4.1
American Indian/Alaskan Native	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Nonresident alien	1.7	1.9	2.2	2.3	2.3	2.3	2.3	2.5
Private institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.5	83.6	82.8	82.2	81.8	81.3	80.3	78.6
Minority	12.4	12.9	13.4	13.7	14.0	14.4	15.4	16.9
Black	8.6	8.7	8.8	8.5	8.3	8.2	8.6	9.1
Hispanic	2.0	2.2	2.5	2.7	2.8	3.1	3.2	3.7
Asian or Pacific Islander	1.4	1.6	1.8	2.1	2.4	2.8	3.2	3.7
American Indian/Alaskan Native	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Nonresident alien	3.1	3.4	3.8	4.2	4.2	4.3	4.3	4.4
4-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	84.4	83.7	82.9	82.4	81.7	81.0	80.5	79.2
Minority	13.1	13.5	13.91	14.0	14.6	15.3	15.8	17.0
Black	8.5	8.5	8.4	8.0	8.0	7.9	8.0	8.4
Hispanic	2.4	2.6	2.9	3.0	3.2	3.6	3.6	4.0
Asian or Pacific Islander	1.7	1.9	2.1	2.5	2.9	3.3	3.6	4.0
American Indian/Alaskan Native	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6
Nonresident alien	2.5	2.8	3.2	3.5	3.7	3.7	3.7	3.8
2-year institutions	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
White	79.3	78.6	78.7	77.9	77.6	76.6	76.0	75.6
Minority	19.6	20.1	19.9	20.8	21.2	22.3	22.7	22.9
Black	11.1	11.0	10.4	10.3	10.1	10.0	9.7	9.8
Hispanic	5.4	5.6	5.6	6.1	6.4	7.3	7.9	8.0
Asian or Pacific Islander	2.0	2.4	2.8	3.3	3.7	4.0	4.1	4.1
American Indian/Alaskan Native	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.0
Nonresident alien	1.1	1.3	1.4	1.3	1.2	1.1	1.2	1.4

NOTE: Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1991, table 194 and unpublished tabulations (based on the IPEDS/HEGIS survey of fall enrollment in postsecondary and higher education, various years).

Table 39-1 Standard errors for estimated percentages in text table for *Indicator 39*

Year	Total	White	Black	Hispanic	Total	White	Black	Hispanic
1960	0.4	0.4	1.4	—	0.8	1.0	1.7	—
1965	0.4	0.4	1.3	—	1.0	1.2	1.9	—
1970	0.4	0.3	1.3	—	1.3	1.6	2.0	—
1975	0.4	0.4	1.3	2.8	1.2	1.5	1.9	1.7
1980	0.4	0.4	1.3	2.8	1.2	1.5	1.8	1.7
1981	0.4	0.4	1.3	2.7	1.2	1.5	1.8	1.7
1982	0.4	0.4	1.3	2.6	—	—	—	—
1983	0.4	0.4	1.3	2.5	1.1	1.4	1.7	1.6
1984	0.4	0.4	1.3	2.5	1.1	1.4	1.7	1.6
1985	0.4	0.4	1.3	2.4	1.2	1.4	1.7	1.5
1986	0.4	0.4	1.3	2.4	1.2	1.5	1.6	1.5
1987	0.4	0.4	1.3	2.4	1.2	1.5	1.6	1.5
1988	0.4	0.4	1.3	2.3	1.2	1.5	1.6	1.5
1989	0.4	0.4	1.3	2.4	1.2	1.5	1.7	1.5
1990	0.4	0.4	1.3	2.3	1.1	1.5	1.5	1.4

— Not available

SOURCE: U. S. Department of Commerce, Bureau of the Census, *Current Popoulation Reports*, series P—20, "Poverty in the United States...", various years, March, Current Population Reports.

Table 40-1 Percentage of schools offering various programs or services by grade, control, and urbanicity: School year 1987-1988

Grade and urbanicity	Bilingual edu-cation	English as a second language	Remedial reading	Remedial math	Programs for the handi-capped	Programs for the gifted and talened	Vocational/ technical programs	Diagnostic and perscriptive services	Extended day
					Public				
Kindergarten	21.4	34.5	82.2	56.5	89.3	74.3	8.3	72.7	17.4
Rural/farming	11.9	14.7	84.9	61.4	88.1	67.8	16.9	70.4	4.9
Small city/town	15.9	32.6	84.4	52.5	90.5	81.6	4.0	75.8	16.2
Suburban	25.5	53.3	81.5	54.7	92.4	82.6	3.7	75.6	26.2
Urban	36.1	49.3	77.1	54.8	87.6	70.8	4.0	71.2	28.9
4th grade	20.8	34.1	82.6	57.3	89.5	76.0	8.3	72.3	17.4
Rural/farming	11.4	14.6	84.9	61.5	87.7	69.2	16.9	70.2	5.5
Small city/town	15.2	31.3	84.5	54.2	91.5	83.9	4.1	74.0	16.0
Suburban	25.2	53.4	82.2	55.2	92.8	84.5	3.6	76.1	26.0
Urban	35.7	49.6	77.8	55.8	87.6	71.8	3.9	70.8	28.7
8th grade	19.9	30.7	81.1	65.1	92.1	70.6	46.7	71.1	5.9
Rural/farming	14.0	16.1	78.5	60.2	89.9	64.5	50.4	68.7	3.1
Small city/town	16.4	34.5	82.1	69.1	97.5	82.0	48.3	72.7	3.6
Suburban	23.8	49.9	84.7	71.6	94.8	78.6	39.6	76.6	8.5
Urban	35.4	50.3	84.1	68.6	90.2	69.0	40.7	71.8	13.2
12th grade	16.3	29.1	75.2	67.7	91.3	61.1	92.6	72.0	4.6
Rural/farming	11.8	15.9	71.3	62.3	92.0	57.7	93.3	68.2	1.8
Small city/town	14.3	28.9	76.4	70.3	91.6	64.8	95.9	73.0	5.0
Suburban	18.6	49.0	78.9	72.1	94.5	65.7	94.1	79.7	5.9
Urban	29.3	47.2	80.9	75.7	86.0	61.5	85.3	74.3	10.8
					Private				
Kindergarten	7.1	9.3	60.0	44.1	17.1	32.7	6.9	44.0	40.0
Rural/farming	5.3	4.7	57.1	34.8	23.2	31.7	10.4	42.1	12.5
Small city/town	4.7	6.1	67.0	50.7	15.8	30.4	6.5	49.9	32.2
Suburban	10.1	10.6	59.3	42.3	16.2	37.5	3.7	45.1	42.6
Urban	7.6	12.5	57.1	44.5	16.0	32.0	7.5	40.4	54.0
4th grade	6.7	8.5	57.9	41.6	16.7	29.5	7.0	42.3	32.7
Rural/farming	4.4	3.9	43.3	27.0	17.6	21.8	8.5	33.7	8.9
Small city/town	4.5	5.4	66.7	47.4	15.4	29.0	6.8	48.4	28.0
Suburban	10.0	9.9	60.9	43.9	18.8	36.9	4.7	45.3	37.1
Urban	7.8	12.7	59.2	45.2	15.8	30.6	7.5	41.7	48.0
8th grade	6.5	9.6	58.2	42.9	18.0	28.2	9.2	41.6	26.4
Rural/farming	4.3	5.1	39.6	28.2	16.2	21.3	10.0	29.3	9.4
Small city/town	4.3	6.1	67.8	46.6	16.8	29.1	9.3	48.3	20.5
Suburban	8.1	9.4	66.7	48.7	21.4	33.6	6.6	48.5	28.5
Urban	8.6	14.8	59.4	47.0	18.2	29.1	10.0	41.6	40.1
12th grade	7.6	13.2	53.0	44.0	18.7	31.1	24.5	35.8	22.2
Rural/farming	8.0	9.2	47.0	36.7	12.6	27.0	16.2	31.2	12.5
Small city/town	5.5	11.7	56.5	42.4	13.5	28.5	22.6	34.6	24.8
Suburban	8.9	10.2	57.8	49.6	27.5	39.1	22.5	46.8	25.0
Urban	8.3	18.2	51.5	46.3	21.1	31.0	31.6	33.5	24.6

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-1988.

Table 40-2 Standard errors for estimated percentages in table 40-1

Grade and urbanicity	Bilingual education	English as a second language	Remedial reading	Remedial math	Programs for the handicapped	Programs for the gifted and talened	Vocational/ technical programs	Diagnostic and perscriptive services	Extended day
					Public				
Kindergarten	0.61	0.77	0.69	0.72	0.67	0.73	0.41	0.96	0.64
Rural/farming	1.06	0.92	1.15	1.54	1.22	1.53	1.00	1.41	0.63
Small city/town	1.35	1.42	1.21	1.40	1.50	1.25	0.58	1.70	1.37
Suburban	1.44	1.91	1.55	2.04	1.15	1.20	0.65	2.09	1.58
Urban	1.14	1.70	1.52	1.70	1.23	1.21	0.61	1.42	1.18
4th grade	0.66	0.77	0.65	0.79	0.54	0.72	0.37	0.93	0.59
Rural/farming	1.10	0.91	1.03	1.43	1.04	1.42	0.97	1.26	0.66
Small city/town	1.33	1.70	1.16	1.55	1.13	1.19	0.53	1.74	1.39
Suburban	1.45	1.75	1.54	1.92	0.99	1.31	0.62	2.00	1.51
Urban	1.23	1.66	1.45	1.79	1.20	1.29	0.58	1.41	1.06
8th grade	0.99	0.99	0.88	0.89	0.68	0.99	1.17	0.99	0.55
Rural/farming	1.36	1.20	1.31	1.43	1.03	1.48	1.68	1.68	0.60
Small city/town	1.82	2.25	1.71	2.09	0.81	1.75	2.09	2.17	0.78
Suburban	2.33	2.83	1.98	2.43	1.29	2.33	2.82	2.38	1.49
Urban	2.50	2.32	2.26	2.20	1.84	2.55	2.65	2.33	1.71
12th grade	0.65	0.86	0.78	0.96	0.69	0.97	0.56	0.79	0.41
Rural/farming	1.00	1.30	1.34	1.50	0.99	1.43	0.72	1.39	0.38
Small city/town	1.19	1.99	1.87	1.79	1.47	1.77	0.85	2.00	1.27
Suburban	1.67	2.21	2.24	2.11	1.16	1.77	1.29	2.01	1.14
Urban	1.43	2.20	1.79	2.06	1.59	1.87	1.96	2.05	1.58
					Private				
Kindergarten	0.80	0.80	1.70	1.72	1.24	1.26	0.86	1.64	1.85
Rural/farming	1.68	1.69	5.47	5.13	4.26	4.51	3.68	5.35	3.58
Small city/town	1.17	1.21	3.40	3.34	2.43	2.63	1.41	3.56	3.58
Suburban	1.91	2.06	3.25	3.14	1.91	2.92	1.28	2.58	2.92
Urban	1.10	1.48	2.28	2.19	1.74	1.77	0.97	2.21	2.47
4th grade	0.72	0.71	2.15	2.09	1.17	1.32	0.76	1.65	1.53
Rural/farming	1.42	0.98	5.97	5.00	2.67	3.81	2.58	4.79	2.40
Small city/town	1.13	1.14	3.12	3.35	2.15	2.46	1.29	2.97	2.97
Suburban	1.93	1.91	3.30	2.98	2.03	2.88	1.37	2.63	2.70
Urban	1.11	0.71	2.25	2.02	1.63	1.80	0.93	2.14	2.20
8th grade	0.92	0.92	2.68	2.40	1.41	1.44	0.92	2.10	1.50
Rural/farming	1.45	1.24	6.61	5.48	2.90	4.48	2.92	4.86	2.67
Small city/town	1.17	1.37	3.30	3.84	2.65	2.78	1.70	3.61	2.48
Suburban	2.03	1.88	3.63	3.59	2.65	2.98	1.66	2.95	3.05
Urban	1.60	1.80	2.50	1.99	1.84	1.82	1.37	2.52	2.24
12th grade	1.51	1.64	3.09	2.64	2.28	2.42	2.20	2.55	1.78
Rural/farming	2.77	3.11	8.19	7.59	3.48	6.84	4.59	7.90	3.82
Small city/town	2.28	2.65	6.98	6.05	4.15	4.53	4.02	6.07	4.44
Suburban	2.92	2.71	5.93	5.80	5.40	4.48	3.56	5.42	4.44
Urban	2.62	3.27	3.93	3.80	3.66	3.70	3.63	3.48	2.64

SOURCE: U.S. Department of Education, National Center for Education Statistics, School and Staffing Survey, 1987-1988.

Note on programs and services offered by schools

Definitions of programs and services indicated by respondent schools in the Schools and Staffing Survey, 1987–1988

Bilingual education—Native language is used to varying degrees in instruction of students with limited English proficiency.

English as a second language—Students with limited English proficiency are provided with intensive instruction in English.

Remedial reading—Organized compensatory, diagnostic, and remedial activities designed to correct and prevent difficulties in the development of reading skills.

Remedial mathematics—Organized compensatory, diagnostic, and remedial activities designed to correct and prevent difficulties in the development of mathematical skills.

Programs for the handicapped—Instruction for the mentally retarded, specific learning disabled, physically handicapped, and other handicapped.

Programs for the gifted and talented—Activities designed to permit gifted and talented students to further develop their abilities.

Vocational or technical programs—Instruction designed to provide students with occupational skills needed for work.

Diagnostic and prescriptive services—Services provided by trained professional to diagnose learning problems of students and to plan and provide therapeutic or educational programs based upon such services.

Extended day—Before- or after-school day-care programs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

Table 41-1 Standard errors for estimated percentages in text table for *Indicator 41*

Grade and urbanicity	Public school enrollment					Private school enrollment				
	Less than 150	150–299	300–499	500–749	750 or more	Less than 150	150–299	300–499	500–749	750 or more
Kindergarten	0.60	0.75	0.78	0.72	0.37	1.82	1.44	0.82	0.46	0.28
Rural	1.39	1.51	1.59	0.71	0.36	4.23	4.15	1.68	0.66	0.05
Town	1.13	1.55	1.62	1.60	0.91	3.87	3.43	1.31	0.78	0.14
Suburban	0.71	1.45	2.27	2.46	1.02	3.24	3.47	1.97	1.19	0.89
Urban	0.45	1.57	1.49	1.49	1.11	2.67	1.99	1.49	0.94	0.55
4th grade	0.56	0.77	0.85	0.71	0.34					
Rural	1.12	1.52	1.42	0.78	0.42	3.82	3.40	1.09	0.41	0.03
Town	0.82	1.46	1.55	1.32	0.70	3.16	2.94	1.10	0.71	0.12
Suburban	0.72	1.36	2.05	2.49	0.99	3.06	3.31	1.89	1.24	0.95
Urban	0.41	1.48	1.34	1.32	1.13	2.24	1.85	1.48	0.88	0.53
8th grade	0.97	0.89	0.84	0.97	0.56	2.37	1.73	0.88	0.53	0.32
Rural	1.69	1.31	1.31	0.99	0.48	4.02	3.46	1.10	0.56	0.04
Town	1.11	1.96	1.86	2.25	1.77	3.72	3.50	1.30	0.86	0.15
Suburban	1.73	1.60	2.04	2.67	2.61	3.16	2.92	2.55	1.45	1.07
Urban	1.26	1.75	1.34	2.12	1.59	2.33	2.15	1.60	1.09	0.64
12th grade	0.77	0.82	0.73	0.71	0.81	2.92	2.49	1.35	1.03	1.04
Rural	1.25	1.38	1.24	1.28	0.81	7.17	6.50	2.47	1.58	0.19
Town	1.57	1.54	1.59	1.79	1.99	5.01	4.66	2.18	1.32	0.93
Suburban	1.77	1.40	1.24	1.61	2.58	5.50	4.78	3.43	3.17	3.05
Urban	1.57	1.39	1.14	1.18	1.83	4.10	2.80	2.32	2.16	1.85

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987-1988.

Table 42-1 Frequency of use of instructional techniques in eighth-grade mathematics class as reported by students and average proficiency score, by sex: 1990

Instructional technique/ frequency of use	Total		Sex of student			
	Percent	Average math Proficiency	Male	Average math proficiency	Female	Average math proficiency
Problems from text						
Daily	73.7	266.8	71.8	268.5	75.7	265.2
Several times per week	14.5	251.5	15.9	252.3	13.0	250.5
Once per week	5.6	240.5	5.6	240.1	5.5	240.9
Less than once per week	3.3	240.1	3.1	238.4	3.5	241.8
Never	3.0	247.2	3.6	249.3	2.3	243.8
Problems from worksheets						
Daily	17.5	246.9	18.9	247.6	16.0	246.1
Several times per week	20.5	257.8	20.4	257.5	20.6	258.0
Once per week	25.3	260.9	25.4	262.8	25.2	258.7
Less than once per week	24.5	273.0	23.9	275.4	25.1	270.7
Never	12.2	268.8	11.4	270.8	13.0	267.0
Small groups						
Daily	7.9	255.3	8.9	257.5	6.8	252.4
Several times per week	6.9	257.6	8.0	258.0	5.7	256.9
Once per week	13.4	260.2	13.6	261.4	13.1	258.9
Less than once per week	27.5	266[illegible]	28.0	267.8	27.0	266.0
Never	44.3	261.1	41.4	262.3	47.4	259.9
Manipulatives*						
Daily	6.3	255.8	7.4	252.9	5.0	260.2
Several times per week	10.0	257.8	11.3	258.7	8.6	256.6
Once per week	12.2	258.5	13.3	259.7	11.0	256.9
Less than once per week	30.8	269.3	30.4	270.9	31.2	267.7
Never	40.8	258.8	37.6	260.4	44.2	257.5
Calculator						
Daily	15.3	267.8	16.2	269.0	14.4	266.4
Several times per week	12.5	265.9	12.5	267.0	12.5	264.8
Once per week	12.3	262.0	13.2	259.7	11.2	264.9
Less than once per week	20.6	263.8	21.1	266.1	20.2	261.3
Never	39.3	257.0	36.9	258.0	41.7	256.1
Computer						
Daily	5.6	246.6	6.5	247.7	4.7	244.9
Several times per week	2.7	247.6	3.3	245.3	2.0	251.5
Once per week	6.9	249.0	6.8	248.7	6.9	249.4
Less than once per week	14.4	268.2	16.4	266.9	12.2	270.1
Never	70.4	263.7	66.8	265.7	74.2	261.7
Reports or projects						
Daily	2.1	231.0	2.7	235.1	1.5	223.4
Several times per week	3.0	232.2	4.2	232.8	1.8	230.9
Once per week	5.0	249.4	6.3	250.4	3.7	247.8
Less than once per week	19.1	268.1	20.6	270.5	17.5	265.1
Never	70.7	263.1	66.2	264.6	75.5	261.7

* Includes rulers, blocks, and solids.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-2 Frequency of use of instructional techniques in eighth-grade mathematics class as reported by students and average proficiency score, by ability grouping of mathematics class: 1990

Instructional technique/ frequency of use	Ability group of class[1]							
	High	Average math proficiency	Average	Average math proficiency	Low	Average math proficiency	Mixed	Average math proficiency
Problems from text								
Daily	84.4	292.4	74.9	262.9	67.6	245.1	70.5	256.8
Several times per week	9.2	269.5	16.0	254.3	16.1	242.9	15.3	248.6
Once per week	2.5	265.0	4.6	241.8	8.6	224.5	6.6	251.0
Less than once per week	1.6	249.5	2.0	238.3	4.3	216.8	3.2	265.8
Never	2.3	292.5	2.5	237.5	3.4	227.1	4.4	259.4
Problems from worksheets								
Daily	10.1	272.4	18.4	248.6	24.9	226.3	18.8	254.2
Several times per week	16.7	280.3	22.4	260.5	21.4	236.5	21.4	258.3
Once per week	24.6	282.0	27.1	262.1	24.9	244.4	24.3	249.9
Less than once per week	32.8	297.6	21.7	264.9	22.0	257.2	24.1	259.4
Never	15.9	301.5	10.4	258.1	6.8	248.5	11.4	256.7
Small groups								
Daily	7.0	275.7	6.0	249.1	8.0	238.1	11.1	261.2
Several times per week	8.2	291.1	3.8	248.9	7.0	227.1	8.0	252.3
Once per week	12.9	289.0	13.8	261.5	12.6	238.5	13.1	254.0
Less than once per week	29.9	292.4	30.1	264.9	26.4	246.9	27.0	259.0
Never	42.1	288.3	46.4	257.9	46.0	241.4	40.8	253.0
Manipulatives[2]								
Daily	4.7	275.8	7.0	255.6	7.8	229.4	5.6	259.2
Several times per week	9.9	286.1	7.8	252.1	9.6	234.4	13.9	263.3
Once per week	10.2	291.2	14.3	260.2	10.7	233.5	13.4	250.4
Less than once per week	35.1	292.3	32.0	266.7	24.3	251.2	32.0	262.1
Never	40.0	287.8	38.9	255.4	47.6	241.1	35.0	248.0
Calculator								
Daily	15.0	296.1	14.4	265.8	10.1	255.9	19.4	256.6
Several times per week	13.2	290.9	13.1	264.9	11.0	228.5	13.3	263.7
Once per week	13.4	294.5	14.5	259.3	11.2	245.0	11.6	254.1
Less than once per week	22.6	288.4	19.8	261.2	18.5	243.5	21.0	261.2
Never	35.8	283.2	38.2	254.3	49.2	239.8	34.8	249.5
Computer								
Daily	4.7	286.5	6.2	246.1	8.4	229.9	3.5	240.9
Several times per week	2.5	282.2	1.6	247.2	3.0	195.9	3.6	256.4
Once per week	5.9	271.0	6.7	252.6	9.2	223.4	6.0	247.3
Less than once per week	15.9	297.3	11.3	264.2	9.6	242.6	17.7	260.8
Never	71.0	289.1	74.2	260.9	69.8	246.9	69.3	256.4
Reports or projects								
Daily	1.4	251.5	2.7	237.5	2.8	212.9	1.9	240.3
Several times per week	2.8	272.9	2.2	237.7	5.7	212.0	3.6	232.9
Once per week	2.7	290.0	6.0	253.9	4.0	230.3	5.4	249.3
Less than once per week	21.8	292.7	16.3	264.2	16.3	247.1	22.0	266.2
Never	71.3	289.2	72.9	260.3	71.1	244.2	67.1	254.3

[1] Ability group identified by student.

[2] Includes rulers, blocks, and solids.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-3 Frequency of use of instructional techniques in eighth-grade mathematics as reported by teachers and average proficiency score, by sex of student: 1990

Instructional technique/ frequency of use	Total		Sex of student			
	Percent	Average math Proficiency	Male	Average math proficiency	Female	Average math proficiency
Problems from text						
Daily	62.5	267.1	60.2	268.6	64.9	265.6
Several times per week	30.6	254.5	32.7	255.9	28.3	252.6
Once per week	3.4	262.3	3.4	262.7	3.4	261.8
Less than once per week	2.2	259.7	3.0	259.6	1.4	260.0
Never	1.3	256.3	0.8	255.2	1.9	256.8
Problems from worksheets						
Daily	5.1	264.5	5.7	265.2	4.4	263.4
Several times per week	29.4	254.1	29.1	255.8	29.7	252.2
Once per week	33.2	259.5	34.7	260.9	31.6	257.9
Less than once per week	29.2	273.3	27.5	274.0	31.0	272.7
Never	3.2	279.0	3.0	282.6	3.4	275.4
Small groups						
Daily	8.0	263.6	8.1	261.8	8.0	265.6
Several times per week	19.5	258.6	20.3	260.0	18.7	257.0
Once per week	22.1	259.5	21.3	261.4	23.0	257.5
Less than once per week	42.6	263.8	42.1	264.7	43.2	262.8
Never	7.8	276.9	8.3	278.3	7.2	275.0
Manipulatives*						
Daily	1.7	268.9	1.5	274.8	1.9	264.0
Several times per week	6.6	251.5	7.2	251.8	6.0	251.0
Once per week	13.5	253.9	13.6	253.8	13.3	254.1
Less than once per week	69.0	263.5	69.3	264.5	68.6	262.3
Never	9.3	282.2	8.5	287.1	10.1	277.8
Calculator						
Daily	12.7	279.8	11.7	279.4	13.9	280.2
Several times per week	13.8	268.2	15.8	268.8	11.7	267.3
Once per week	16.7	259.5	18.9	259.8	14.2	259.0
Less than once per week	38.3	258.6	35.5	261.0	41.4	256.4
Never	18.4	258.2	18.1	259.0	18.8	257.4
Computer						
Daily	0.7	271.7	0.8	262.3	0.6	285.4
Several times per week	1.3	253.8	1.4	251.8	1.1	256.6
Once per week	10.3	244.0	9.9	246.2	10.7	241.7
Less than once per week	33.9	264.1	33.8	265.7	34.0	262.4
Never	53.8	265.4	54.1	266.0	53.6	264.7
Reports or projects						
Daily	0.1	167.7	0.1	167.7	0.0	—
Several times per week	0.0	—	0.0	—	0.0	—
Once per week	2.7	254.7	3.1	261.3	2.2	244.3
Less than once per week	54.6	262.4	53.4	264.2	55.9	260.6
Never	42.7	263.9	43.4	264.2	41.9	263.7

* Includes rulers, blocks, and solids.

— No associated NAEP math score due to no respondents in this category

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-4 Frequency of use of instructional techniques in eighth-grade mathematics class as reported by teachers and average proficiency score, by ability grouping of mathematics class: 1990

Instructional technique/frequency of use	Ability group of class[1]							
	High	Average math proficiency	Average	Average math proficiency	Low	Average math proficiency	Mixed	Average math proficiency
Problems from text								
Daily	82.3	289.6	50.4	261.7	58.7	245.2	63.0	256.7
Several times per week	15.6	285.4	45.7	257.4	30.4	232.5	27.3	246.0
Once per week	0.0	—	0.6	231.9	8.2	251.6	7.3	273.1
Less than once per week	0.3	280.7	3.0	261.2	1.6	222.1	2.4	281.5
Never	1.8	279.9	0.3	243.6	1.1	209.4	0.0	—
Problems from worksheets								
Daily	4.1	298.8	2.8	278.9	12.9	249.3	3.0	252.5
Several times per week	17.5	271.8	36.6	257.3	43.4	236.6	22.7	255.1
Once per week	28.8	283.6	40.8	258.6	24.4	242.9	34.5	248.7
Less than once per week	45.2	296.4	18.2	263.6	18.1	245.3	36.7	260.5
Never	4.4	302.5	1.6	259.6	1.1	210.9	3.1	280.8
Small groups								
Daily	9.0	299.8	4.5	248.4	13.3	237.2	8.7	262.4
Several times per week	19.5	283.0	15.1	256.6	24.0	232.2	18.9	255.8
Once per week	17.5	279.7	25.9	257.3	12.5	243.0	28.4	254.3
Less than once per week	44.4	290.3	45.1	258.9	41.2	247.9	40.4	253.3
Never	9.7	298.3	9.4	279.4	9.0	236.8	3.6	273.7
Manipulatives[2]								
Daily	1.9	305.0	2.2	258.0	0.8	207.6	0.6	271.1
Several times per week	1.6	275.5	5.9	255.2	9.1	230.9	9.5	258.1
Once per week	10.5	274.8	11.6	256.1	17.3	233.3	17.3	252.7
Less than once per week	62.6	287.9	77.1	260.8	68.6	245.5	65.4	256.7
Never	23.4	299.6	3.1	281.2	4.3	233.2	7.2	246.9
Calculator								
Daily	18.0	300.8	8.8	273.4	9.8	258.4	12.8	268.6
Several times per week	13.8	289.8	12.2	257.4	7.6	260.3	17.3	265.6
Once per week	12.7	297.5	17.8	263.3	21.1	229.8	17.5	250.1
Less than once per week	36.6	283.0	41.3	257.8	43.9	243.3	34.3	247.5
Never	18.9	281.6	19.9	253.7	17.6	231.0	18.1	257.3
Computer								
Daily	2.1	292.8	0.0	—	1.3	219.1	0.0	—
Several times per week	0.9	297.4	1.0	252.5	2.5	220.8	0.4	272.0
Once per week	6.5	282.7	6.0	231.2	16.6	222.8	16.2	248.4
Less than once per week	31.5	290.8	37.6	262.3	28.4	244.1	37.2	254.2
Never	59.0	287.7	55.5	260.5	51.2	246.7	46.2	259.0
Reports or projects								
Daily	0.0	—	0.0	—	0.4	167.7	0.0	—
Several times per week	0.0	—	0.0	—	0.0	—	0.0	—
Once per week	1.7	293.0	1.9	252.4	3.5	230.5	4.3	253.9
Less than once per week	60.3	287.2	57.4	259.0	43.8	237.5	55.0	253.4
Never	38.1	290.9	40.7	260.5	52.3	245.4	40.7	258.7

[1] Ability group identified by student.

[2] Includes rulers, blocks, and solids.

— No associated NAEP math score due to no respondents in this category

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-5 Standard errors for estimated percentages and proficiency scores in table 42-1

Instructional technique/ frequency of use	Total		Sex of student			
	Percent	Average math Proficiency	Male	Average math proficiency	Female	Average math proficiency
Problems from text						
Daily	1.9	1.2	2.4	1.6	1.8	1.3
Several times per week	0.8	1.7	1.2	2.5	1.0	2.5
Once per week	0.9	4.4	1.3	6.5	0.8	4.2
Less than once per week	0.7	5.7	0.7	5.9	0.9	7.3
Never	0.6	6.7	0.8	8.5	0.7	9.3
Problems from worksheets						
Daily	1.7	2.9	1.8	3.4	1.8	3.4
Several times per week	1.3	2.0	1.5	2.7	1.6	2.1
Once per week	1.2	1.4	1.6	2.3	1.5	1.8
Less than once per week	1.8	2.0	2.1	2.7	1.8	2.2
Never	1.3	3.2	1.3	4.2	1.6	3.4
Small groups						
Daily	1.0	3.1	1.4	4.0	1.0	4.3
Several times per week	1.0	3.7	1.2	4.0	0.9	6.3
Once per week	1.4	3.5	1.7	4.9	1.4	3.4
Less than once per week	1.4	2.0	1.7	2.6	1.8	1.7
Never	2.9	1.6	2.9	1.8	3.2	1.8
Manipulatives*						
Daily	1.0	6.3	1.0	5.6	1.1	8.3
Several times per week	1.0	2.8	1.2	3.3	1.0	3.1
Once per week	0.8	2.8	1.0	3.4	1.0	3.1
Less than once per week	1.2	1.5	1.5	2.1	1.9	1.5
Never	2.2	1.6	2.2	1.8	2.6	1.9
Calculator						
Daily	2.1	2.4	2.1	3.0	2.5	3.3
Several times per week	1.1	3.5	1.5	4.9	1.4	3.3
Once per week	0.9	2.9	1.2	3.6	1.0	3.4
Less than once per week	1.4	2.0	1.3	2.5	1.8	2.1
Never	3.1	1.4	3.1	1.7	3.4	1.7
Computer						
Daily	0.7	3.8	0.9	3.9	0.8	6.2
Several times per week	0.4	5.3	0.6	6.5	0.4	9.2
Once per week	0.8	3.4	0.9	4.9	1.0	3.7
Less than once per week	1.3	2.8	1.6	3.8	1.4	3.0
Never	1.6	1.4	2.0	1.8	1.7	1.4
Reports or projects						
Daily	0.3	4.6	0.4	5.7	0.3	8.1
Several times per week	0.4	4.9	0.6	5.2	0.5	10.5
Once per week	0.5	3.6	0.8	4.1	0.6	6.1
Less than once per week	1.3	2.5	1.6	3.0	1.5	3.1
Never	1.6	1.3	1.8	1.6	1.9	1.4

*Includes rulers, blocks, and solids.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-6 Standard errors for estimated percentages and proficiency scores in table 42-2

Instructional technique/ frequency of use	Ability group of class[1]							
	High	Average math proficiency	Average	Average math proficiency	Low	Average math proficiency	Mixed	Average math proficiency
Problems from text								
Daily	2.2	2.2	2.3	2.0	2.7	3.9	6.4	3.0
Several times per week	1.2	4.8	1.4	2.9	2.2	3.8	2.6	4.4
Once per week	0.5	14.9	0.9	4.9	1.9	7.0	3.5	12.8
Less than once per week	0.7	14.2	0.5	7.2	1.5	5.9	1.5	19.1
Never	1.7	4.8	1.0	6.0	1.0	7.2	1.6	15.9
Problems from worksheets								
Daily	2.3	8.1	2.2	2.8	3.8	3.8	4.7	7.5
Several times per week	2.6	4.3	1.9	3.2	2.8	3.9	3.1	4.7
Once per week	2.8	3.5	2.0	2.4	3.0	4.8	3.6	3.4
Less than once per week	4.1	3.4	1.8	2.9	3.8	5.4	4.2	3.3
Never	3.1	4.9	1.6	4.7	1.6	7.7	2.6	5.4
Small groups								
Daily	1.8	7.1	1.0	4.7	1.9	9.3	4.2	6.2
Several times per week	1.7	5.6	0.8	5.4	1.7	6.8	2.9	12.9
Once per week	2.2	5.7	1.7	3.4	3.1	5.9	2.6	4.6
Less than once per week	2.8	2.9	2.7	2.6	3.4	3.9	3.4	3.6
Never	3.8	3.2	3.8	2.5	3.9	3.9	6.7	3.7
Manipulatives[2]								
Daily	0.9	6.6	1.4	6.5	2.1	5.9	1.9	13.6
Several times per week	1.5	5.9	1.2	4.3	2.0	4.4	3.1	6.2
Once per week	1.3	4.1	1.2	2.8	2.2	5.5	1.9	5.6
Less than once per week	2.8	2.8	2.3	2.4	2.6	3.4	3.0	2.6
Never	3.0	2.8	3.4	2.8	4.3	4.4	4.9	3.7
Calculator								
Daily	3.7	4.1	3.3	3.3	2.6	8.6	5.7	6.3
Several times per week	1.9	3.6	1.9	3.9	2.1	6.6	3.6	6.5
Once per week	2.0	3.2	1.7	4.5	1.6	6.8	2.5	4.7
Less than once per week	2.5	4.2	1.8	2.2	2.2	3.0	4.2	3.4
Never	4.5	3.5	4.9	2.5	4.6	4.1	7.5	4.4
Computer								
Daily	1.8	5.4	1.0	5.3	1.9	7.4	1.1	5.6
Several times per week	0.7	7.5	0.4	7.5	1.0	7.0	1.3	8.5
Once per week	1.6	8.0	1.5	7.7	2.5	6.5	2.1	5.6
Less than once per week	2.6	3.1	1.9	3.6	2.0	5.0	3.1	5.8
Never	3.3	2.4	2.3	1.9	3.7	3.4	5.3	3.8
Reports or projects								
Daily	0.5	9.4	0.7	7.3	1.5	10.7	0.7	12.1
Several times per week	1.3	5.8	0.5	4.4	1.6	7.6	1.0	12.2
Once per week	0.5	8.1	0.8	4.3	1.3	8.8	1.5	8.0
Less than once per week	2.6	3.8	2.0	4.7	2.1	4.9	3.8	4.0
Never	2.8	2.6	2.1	1.9	4.1	3.6	4.5	2.9

[1] Ability group identified by student.

[2] Includes rulers, blocks, and solids.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-7 Standard errors for estimated percentages and proficiency scores in table 42-3

Instructional technique/ frequency of use	Total		Sex of student			
	Percent	Average math Proficiency	Male	Average math proficiency	Female	Average math proficiency
Problems from text						
Daily	3.4	1.8	3.7	2.1	3.6	1.8
Several times per week	3.1	2.9	3.4	3.6	3.3	2.5
Once per week	1.5	6.2	1.3	6.4	1.7	7.3
Less than once per week	2.2	8.0	1.5	11.5	1.1	3.5
Never	1.3	7.8	0.5	9.8	1.0	10.3
Problems from worksheets						
Daily	1.7	5.3	1.9	8.0	1.9	2.9
Several times per week	3.7	2.2	3.8	3.0	4.1	2.3
Once per week	3.4	2.3	3.6	2.8	3.7	2.3
Less than once per week	3.7	3.0	3.6	3.7	4.2	2.9
Never	1.2	6.0	1.2	6.3	1.4	7.0
Small groups						
Daily	2.5	8.4	2.6	9.5	2.5	8.0
Several times per week	3.2	3.1	3.1	4.5	3.7	3.5
Once per week	3.4	2.8	3.3	3.4	3.9	3.0
Less than once per week	4.1	2.3	4.0	3.1	4.7	2.1
Never	2.0	5.4	2.1	5.3	2.1	6.6
Manipulatives*						
Daily	0.7	15.2	0.7	11.5	0.8	18.6
Several times per week	1.9	4.5	2.1	6.4	1.9	5.4
Once per week	2.7	4.1	2.9	4.7	2.7	4.9
Less than once per week	3.9	1.9	4.1	2.1	4.2	1.9
Never	2.6	5.9	2.0	7.2	3.3	6.0
Calculator						
Daily	3.8	4.4	4.0	5.9	3.8	3.9
Several times per week	2.6	4.3	3.1	4.8	2.4	4.7
Once per week	2.3	5.3	3.0	6.1	2.0	5.1
Less than once per week	4.3	2.2	4.3	2.7	4.7	2.3
Never	4.0	3.9	3.8	4.3	4.5	4.2
Computer						
Daily	0.5	21.1	0.5	39.7	0.7	3.1
Several times per week	0.6	12.1	0.6	10.6	0.7	14.0
Once per week	3.4	5.9	3.4	8.7	3.9	5.7
Less than once per week	4.5	2.9	4.4	3.4	4.8	3.1
Never	4.2	2.1	4.2	2.6	4.6	2.1
Reports or projects						
Daily	0.1	—	0.1	—	0.0	0.0
Several times per week	0.0	0.0	0.0	0.0	0.0	0.0
Once per week	1.2	8.2	1.6	11.4	0.8	8.4
Less than once per week	4.5	2.4	4.7	3.0	4.5	2.3
Never	4.7	2.3	5.0	2.8	4.6	2.4

*Includes rulers, blocks, and solids.

—No associated NAEP math score due to no respondents in this category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 42-8 Standard errors for estimated percentages and proficiency scores in table 42-4

Instructional technique/ frequency of use	Ability group of class[1]							
	High	Average math proficiency	Average	Average math proficiency	Low	Average math proficiency	Mixed	Average math proficiency
Problems from text								
Daily	4.5	2.6	5.3	2.7	6.3	4.1	10.0	3.3
Several times per week	4.2	7.1	5.2	2.9	6.1	5.7	7.4	4.2
Once per week	0.0	0.0	0.3	19.1	2.5	4.0	5.1	4.4
Less than once per week	0.3	—	2.1	1.8	1.3	8.9	1.9	17.2
Never	1.6	10.9	0.3	4.8	0.3	7.8	0.0	0.0
Problems from worksheets								
Daily	2.2	4.8	2.1	4.6	4.4	4.4	1.7	5.2
Several times per week	4.7	5.2	5.0	3.7	7.1	3.2	7.2	7.3
Once per week	4.6	5.5	5.0	2.5	5.1	8.1	7.8	5.5
Less than once per week	6.1	3.1	3.2	5.5	5.4	5.2	7.8	3.3
Never	2.3	8.6	1.0	2.2	0.8	6.8	2.9	2.3
Small groups								
Daily	3.4	6.0	2.6	19.3	5.1	9.1	5.5	15.6
Several times per week	4.4	4.2	3.6	5.0	7.0	3.7	6.2	7.6
Once per week	4.4	7.7	5.2	4.2	4.6	6.4	8.6	5.4
Less than once per week	5.5	3.1	5.3	2.9	7.5	5.3	9.5	4.3
Never	3.2	5.7	3.2	6.1	4.5	10.0	3.1	12.3
Manipulatives[2]								
Daily	1.3	26.2	1.4	23.2	0.7	8.8	0.5	14.7
Several times per week	1.6	14.6	1.9	5.8	4.5	5.2	4.7	8.6
Once per week	3.9	8.7	3.5	5.8	4.5	7.3	6.8	9.0
Less than once per week	5.8	2.9	4.1	2.5	6.1	4.1	9.3	3.7
Never	5.3	5.5	1.2	6.2	2.4	23.8	5.0	3.5
Calculator								
Daily	6.2	5.5	4.0	6.5	3.7	12.7	8.6	14.7
Several times per week	3.3	6.7	3.1	5.0	3.5	4.9	7.3	4.3
Once per week	3.7	5.1	3.5	5.2	6.2	4.4	6.3	5.5
Less than once per week	5.8	3.7	5.5	2.5	6.7	4.2	9.0	4.7
Never	5.3	7.0	5.0	5.9	6.0	6.6	7.9	7.8
Computer								
Daily	1.6	5.3	0.0	0.0	1.3	—	0.0	0.0
Several times per week	0.6	8.0	0.6	7.3	1.5	23.0	0.5	—
Once per week	4.1	3.3	3.0	3.7	6.4	7.0	8.6	10.9
Less than once per week	6.0	4.5	6.2	2.8	6.7	4.3	8.3	6.2
Never	6.2	3.3	6.5	3.2	6.7	4.8	7.9	3.5
Reports or projects								
Daily	0.0	0.0	0.0	0.0	0.4	—	0.0	0.0
Several times per week	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Once per week	1.0	13.3	1.3	23.1	2.5	13.5	2.7	25.2
Less than once per week	6.6	2.9	5.4	2.6	7.9	4.2	8.8	4.7
Never	6.6	3.9	5.7	3.9	8.3	5.1	9.2	4.3

[1] Ability group identified by student.

[2] Includes rulers, blocks, and solids.

— No associated NAEP math score due to no respondents in this category

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Assessment for Educational Progress, Trial State Assessment, Mathematics Almanac, 1991.

Table 43-1 Percentage of 12- to 19-year-old students reporting behavior taken to avoid attacks in the past 6 months, by sex, race/ethnicity, and control of school: 1989

Behavior taken to avoid attacks	Total	Sex		Race/ethnicity					Control of school	
		Male	Female	White	Black	Hispanic	Asian Pacific Is.	American Indian	Public	Private
Stay home	1.2	1.0	1.4	1.1	1.0	2.5	0.3	3.2	1.3	0.5
Stay away from shortest route to school	1.5	1.5	1.6	1.0	2.4	3.0	4.3	1.0	1.6	0.9
Stay away from school entrances	1.3	1.3	1.3	1.0	2.1	1.4	3.5	0.0	1.4	0.2
Stay away from halls/stairs	2.1	1.8	2.4	1.7	2.9	3.0	3.3	1.2	2.2	0.5
Stay away from cafeteria	1.6	1.6	1.6	1.3	2.6	2.4	1.8	2.3	1.7	0.4
Stay away from restrooms	2.7	3.0	2.5	2.3	4.0	3.5	2.7	0.9	2.9	0.7
Stay away from other places inside school	1.1	1.0	1.2	0.8	1.7	1.6	2.3	2.0	1.2	0.1
Stay away from parking lot	1.3	1.3	1.4	1.1	1.6	2.1	2.8	2.1	1.4	0.9
Stay away from other places on grounds	1.7	1.8	1.6	1.6	1.8	2.6	2.3	0.9	1.8	0.7
Stay away from extracurricular activities	1.1	1.1	1.1	0.7	2.2	1.0	1.9	4.1	1.1	0.4

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Survey, School Crime Supplement, 1989.

Table 43-2 Standard errors for percentages in text table for *Indicator* 43

Activity	Total	Sex		Race/ethnicity					Control of school	
		Male	Female	White	Black	Hispanic	Asian Pacific Is.	American Indian	Public	Private
Street gangs in school	0.4	0.6	0.6	0.5	1.2	1.8	3.2	4.3	0.5	0.8
Something taken directly by force	0.1	0.2	0.1	0.1	0.3	0.4	0.0	0.0	0.1	0.4
Something stolen from desk/locker/other	0.4	0.5	0.6	0.5	1.0	1.2	2.3	5.3	0.4	1.3
Physically attacked	0.2	0.3	0.2	0.2	0.5	0.7	0.7	3.5	0.2	0.6
Bring something to school to protect yourself	0.1	0.2	0.1	0.2	0.4	0.4	0.6	2.4	0.1	0.4
Teacher attacked or threaten with attack	0.4	0.6	0.6	0.5	1.2	1.4	2.1	5.0	0.5	0.9

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Survey, School Crime Supplement, 1989.

Table 43-3 Standard errors for percentages in table 43-1

Behavior taken to avoid attacks	Total	Sex		Race/ethnicity					Control of school	
		Male	Female	White	Black	Hispanic	Asian Pacific Is.	American Indian	Public	Private
Stay home	0.1	0.2	0.2	0.1	0.3	0.6	0.4	2.4	0.1	0.3
Stay away from shortest route to school	0.1	0.2	0.2	0.1	0.5	0.7	1.4	1.4	0.2	0.4
Stay away from school entrances	0.1	0.1	0.2	0.2	0.4	0.0	1.0	1.4	0.1	0.5
Stay away from halls/stairs	0.2	0.2	0.3	0.2	0.5	0.7	1.3	1.5	0.2	0.3
Stay away from cafeteria	0.2	0.1	0.2	0.2	0.5	0.6	1.1	1.5	0.2	0.5
Stay away from restrooms	0.2	0.3	0.3	0.2	0.6	0.7	1.2	1.3	0.2	0.3
Stay away from other places inside school	0.1	0.2	0.2	0.1	0.4	0.5	1.1	1.9	0.1	0.1
Stay away from parking lot	0.1	0.2	0.2	0.1	0.4	0.6	1.2	2.0	0.1	0.4
Stay away from other places on grounds	0.2	0.2	0.2	0.2	0.4	0.6	1.1	1.3	0.2	0.3
Stay away from extracurricular activities	0.1	0.2	0.2	0.1	0.4	0.4	1.0	2.7	0.1	0.3

SOURCE: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, National Crime Survey, School Crime Supplement, 1989.

Table 44-1 Percentage of high school seniors who have used selected ‘drugs and alcohol, by frequency of use: 1975–1991

Substance used	1975	1976	1977	1978	1979	1980	1981	1982
				Number				
Sample size	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700
				Percent who ever used				
All illegal drugs*	55.2	58.3	61.6	64.1	65.1	65.4	65.6	64.4
Marijuana/hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0
Alcohol	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8
				Percent who used in the last 12 months				
All illegal drugs*	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4
Marijuana/hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5
Alcohol	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8
				Percent who used in the last 30 days				
All illegal drugs*	30.7	34.2	37.6	38.9	38.9	37.2	36.9	32.5
Marijuana/hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0
Alcohol	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7

Substance used	1983	1984	1985	1986	1987	1988	1989	1990	1991
					Number				
Sample size	16,300	15,900	16,000	15,200	16,300	16,300	16,700	15,200	15,000
					Percent who ever used				
All illegal drugs*	62.9	61.6	60.6	57.6	56.6	53.9	50.9	47.9	44.1
Marijuana/hashish	57.0	54.9	54.2	50.9	50.2	47.2	43.7	40.7	36.7
Cocaine	16.2	16.1	17.3	16.9	15.2	12.1	10.3	9.4	7.8
Alcohol	92.6	92.6	92.2	91.3	92.2	92.0	90.7	89.5	88.0
					Percent who used in the last 12 months				
All illegal drugs*	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	—
Marijuana/hashish	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	—
Cocaine	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	—
Alcohol	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6	—
					Percent who used in the last 30 days				
All illegal drugs*	30.5	29.2	29.7	27.1	24.7	21.3	19.7	17.2	16.4
Marijuana/hashish	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0	13.8
Cocaine	4.9	5.8	6.7	6.2	4.3	3.4	2.8	1.9	1.4
Alcohol	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0

Not available.

* Includes marijuana, hallucinogens, cocaine, and heroin, and other opiates, stimulants, sedatives, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under doctor's orders. Data for years 1982-1991 based on attempts to exclude the inappropriate reporting of non-prescription stimulants.

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-2 Percentage of high school seniors using drugs or alcohol in a 1-year period: 1985–1989 (data combined)

Type of drug	White		Black		Mexican American		Puerto Rican/ Latin American		Asian American		American Indian	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Percent who used within last 12 months											
Sample size	28,056	29,808	3,688	4,499	1,518	1,599	680	712	982	917	537	531
Marijuana	40.2	36.0	29.8	18.4	37.3	26.0	30.6	21.3	19.6	17.1	42.0	44.0
Inhalents[1]	8.8	5.2	2.6	2.2	6.0	4.3	5.1	2.9	4.8	3.2	9.6	4.4
Hallucinogens	8.3	5.0	1.9	0.6	5.9	2.2	6.5	2.1	3.0	2.2	10.0	9.0
LSD	7.0	3.9	1.3	0.3	5.2	1.6	3.4	1.1	2.5	1.9	7.8	7.2
Cocaine	11.9	9.3	6.1	2.6	14.7	7.6	15.6	8.2	5.8	5.7	14.2	15.5
Heroin	0.7	0.3	0.7	0.4	0.9	0.4	1.2	0.4	0.4	0.2	1.5	1.0
Other opiates[2]	6.5	5.3	1.9	1.2	3.2	2.1	3.0	1.6	3.1	2.1	7.4	5.7
Stimulants[2]	13.6	14.7	4.6	3.1	11.3	10.1	8.0	5.9	5.6	7.0	17.0	19.4
Sedatives[2]	5.3	4.4	2.2	1.2	4.7	2.7	4.6	2.6	3.4	2.6	8.8	6.4
Barbiturates[2]	4.4	3.8	1.9	1.1	4.1	2.4	4.0	2.5	2.6	2.3	7.2	6.2
Methaqualone[2]	2.5	1.4	0.9	0.3	1.2	0.5	2.3	0.5	1.5	0.9	4.8	2.2
Tranquilizers[2]	5.8	5.9	1.7	1.4	2.6	2.1	3.1	4.1	3.2	1.8	6.9	8.7
Alcohol	88.3	88.6	72.5	63.9	82.4	73.6	80.6	77.2	69.3	67.5	82.0	81.3

[1] Respondents represent four-fifths of sample size indicated.

[2] Only drug use which was not under a doctor's orders are included here.

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-3 Percentage of high school seniors using drugs, alcohol, or cigarettes in a 1-year period: 1985–1989 (data combined)

Type of drug	White		Black		Mexican American		Puerto Rican/ Latin American		Asian American		American Indian	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Percent who used within last 30 days											
Sample size	28,056	29,808	3,688	4,499	1,518	1,599	680	712	982	917	537	531
Marijuana	25.0	19.8	18.5	9.9	22.0	13.6	18.9	9.6	9.7	8.1	27.6	23.9
Inhalents[1]	3.4	2.0	1.4	1.4	2.3	2.1	2.0	0.8	1.3	0.8	5.2	0.9
Hallucinogens	3.5	1.7	0.9	0.3	2.4	0.7	3.0	0.4	1.5	0.3	3.6	2.7
LSD	2.8	1.1	0.6	0.2	1.9	0.3	1.6	0.2	1.1	0.1	3.1	2.2
Cocaine	5.6	4.1	2.6	1.3	8.2	3.0	8.1	2.9	1.8	2.6	7.3	9.2
Heroin	0.3	0.1	0.5	0.3	0.3	0.2	0.9	0.2	0.1	0.0	1.1	0.4
Other opiates[2]	2.3	1.9	0.9	0.6	1.1	0.7	1.5	0.5	1.6	0.7	4.0	2.4
Stimulants[2]	5.6	6.0	1.9	1.3	4.9	4.8	3.1	1.2	2.1	3.6	8.1	10.3
Sedatives[2]	2.2	1.7	1.1	0.5	2.0	0.9	1.8	1.3	1.9	1.3	4.8	2.6
Barbiturates[2]	1.8	1.5	0.9	0.5	1.7	0.8	1.3	1.2	1.4	1.0	3.7	2.1
Methaqualone[2]	0.9	0.5	0.5	0.1	0.6	0.2	0.9	0.1	0.8	0.6	2.5	0.9
Tranquilizers[2]	1.9	2.0	0.8	0.5	0.8	0.9	0.6	1.5	1.7	0.9	3.1	2.2
Alcohol	72.3	66.6	49.2	32.8	65.0	50.5	55.4	43.0	43.7	34.2	69.0	60.2
Cigarettes	29.8	34.0	15.6	13.3	23.8	18.7	22.0	24.7	16.8	14.3	36.8	43.6

[1] Respondents represent four-fifths of sample size indicated.

[2] Only drug use which was not under a doctor's orders are included here.

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-4 Percentage of high school seniors using drugs, alcohol, or cigarettes in a 1-year period: 1985–1989 (data combined)

Type of drug	White		Black		Mexican American		Puerto Rican/ Latin American		Asian American		American Indian	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	Percent who used daily in last 30 days											
Sample size	28,056	29,808	3,688	4,499	1,518	1,599	680	712	982	917	537	531
Marijuana/Hashish	5.1	2.1	2.8	0.9	4.2	1.1	3.5	0.5	1.7	0.5	8.2	4.3
Alcohol1												
Daily	7.0	2.8	4.2	0.7	8.3	2.6	4.0	0.9	2.3	0.9	10.1	5.4
Five or more drinks in a row/last 2 weeks	48.1	31.3	24.0	9.3	45.3	23.6	31.4	14.5	19.4	10.7	48.1	33.7
Cigarettes	18.8	22.5	8.6	7.1	11.6	8.1	13.3	13.3	9.0	9.4	26.0	33.8
Half-pack or more per day	12.5	13.3	3.3	2.2	5.2	2.5	6.1	4.2	4.4	4.5	18.4	23.4

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-5 Percentage of *college students* who have used selected drugs and alcohol, by frequency of use: 1980–1990

Substance used	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
	Number										
Sample size	1,040	1,130	1,150	1,170	1,110	1,080	1,190	1,220	1,310	1,300	1,400
	Percent who ever used										
All illicit drugs*	69.4	66.8	64.6	66.9	62.7	65.2	61.8	60.0	58.4	55.6	54.0
Marijuana	65.0	63.3	60.5	63.1	59.0	60.6	57.9	55.8	54.3	51.3	49.1
Cocaine	22.0	21.5	22.4	23.1	21.7	22.9	23.3	20.6	15.8	14.6	11.4
Alcohol	94.3	95.2	95.2	95.0	94.2	95.3	94.9	94.1	94.9	93.7	93.1
	Percent who used in the last 12 months										
All illicit drugs*	56.2	55.0	49.5	49.8	45.1	46.3	45.0	40.1	37.4	36.7	33.3
Marijuana	51.2	51.3	44.7	45.2	40.7	41.7	40.9	37.0	34.6	33.6	29.4
Cocaine	16.8	16.0	17.2	17.3	16.3	17.3	17.1	13.7	10.0	8.2	5.6
Alcohol	90.5	92.5	92.2	91.6	90.0	92.0	91.5	90.9	89.6	89.6	89.0
	Percent who used in the last 30 days										
All illicit drugs*	38.4	37.6	31.3	29.3	27.0	26.1	25.9	22.4	18.5	18.2	15.2
Marijuana	34.0	33.2	26.8	26.2	23.0	23.6	22.3	20.3	16.8	16.3	14.0
Cocaine	6.9	7.3	7.9	6.5	7.6	6.9	7.0	4.6	4.2	2.8	1.2
Alcohol	81.8	81.9	82.8	80.3	79.1	80.3	79.7	78.4	77.0	76.2	74.5

* Use of any illicit drug includes any use of marijuana, hallucinogens, cocaine, and heroine, or any use of other opiates, stimulants, barbiturates, methaqualone (until 1990), or tranquilizers not under a doctor's orders.

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-6 Confidence intervals (95 percentage level) for estimated percentage in text table 1 for *Indicator 44* and supplemental tables 44-1 and 44-5

Observed percent*	Upper and lower limit	Number of cases		
		10,000	15,000	20,000
95	+	0.7	0.6	0.6
	-	0.8	0.7	0.7
90	+	0.9	0.9	0.8
	-	1.0	0.9	0.9
85	+	1.1	1.0	1.0
	-	1.2	1.1	1.1
80	+	1.3	1.2	1.1
	-	1.3	1.2	1.2
70	+	1.5	1.4	1.3
	-	1.5	1.4	1.3
50	+	1.6	1.5	1.4
	-	1.6	1.5	1.4
30	+	1.5	1.4	1.3
	-	1.5	1.4	1.3
20	+	1.3	1.2	1.2
	-	1.3	1.2	1.1
15	+	1.2	1.1	1.1
	-	1.1	1.0	1.0
10	+	1.0	0.9	0.9
	-	0.9	0.9	0.8
5	+	0.8	0.7	0.7
	-	0.7	0.6	0.6
3	+	0.6	0.6	0.5
	-	0.5	0.5	0.5
1	+	0.4	0.3	0.3
	-	0.3	0.3	0.2

* The table entries, when added to and subtracted from the observed percentage, establish the limits of the 95 percentage confidence interval (calculated as 1.96 standard sampling errors.)

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 44-7 Confidence intervals (95 percentage level) for estimated percentages in text table 2 for *Indicator 44* and supplemental tables 44-2 to 44-4

Race/ethnicity	Percent size		
	50%	20% or 80%	10%
White	1.7	1.3	1.0
Black	2.8	2.2	1.7
Mexican American	3.7	3.0	2.3
Puerto Rican/Latin American	5.6	4.5	3.3
Asian American	4.8	3.8	2.9
American Indian	6.3	5.0	3.8

* The table entries, when added to and subtracted from the percentage size, establish the limits of the 95 percentage confidence interval (calculated as 1.96 standard sampling errors).

NOTE: Confidence intervals vary greatly depending upon sample size, design effects and percentage size.

SOURCE: U.S. Department of Health and Human Services; Alcohol, Drug Abuse, and Mental Health Administration; National Institute on Drug Abuse, *Drug Use Among American High School Students, College Students, and Other Young Adults*, 1991.

Table 45-1 Percentage of students 16 to 24 years old enrolled in high school who were employed in October, by sex and hours worked per week: 1973–1990

Year	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	36.1	15.4	3.3	39.3	19.5	4.9	32.5	10.8	1.5
1974	35.2	15.1	3.1	38.1	18.5	4.3	32.0	11.4	1.7
1975	32.9	13.0	2.7	34.5	15.7	3.9	31.1	10.0	1.3
1976	33.4	14.3	2.6	35.3	17.3	3.7	31.3	10.9	1.3
1977	35.8	15.7	3.2	39.0	19.0	4.4	32.2	12.1	2.1
1978	38.2	16.2	2.9	39.8	19.2	3.9	36.5	12.9	1.8
1979	38.0	16.2	2.7	39.5	19.1	3.5	36.3	13.0	1.8
1980	35.1	13.3	2.3	36.0	14.7	3.0	34.0	11.9	1.4
1981	32.5	12.0	2.1	34.7	14.2	2.9	30.1	9.8	1.2
1982	29.5	9.7	1.6	29.3	10.6	2.1	29.8	8.6	0.9
1983	28.7	9.8	1.5	28.6	10.0	1.9	28.9	9.6	1.1
1984	31.0	11.5	1.3	31.3	12.6	2.0	30.6	10.3	0.4
1985	31.3	11.9	1.2	31.6	12.8	1.8	31.0	11.0	0.6
1986	34.1	13.7	1.9	33.2	14.0	2.6	35.2	13.4	1.2
1987	34.6	13.4	1.6	33.5	15.1	2.1	35.9	11.5	1.0
1988	35.1	14.2	1.6	34.7	16.7	2.3	35.5	11.3	0.9
1989	37.6	14.8	1.9	36.8	16.4	2.8	38.4	13.0	0.9
1990	32.1	11.9	2.0	32.7	13.2	2.4	31.4	10.4	1.6

* Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-2 Percentage of students 16 to 24 years old enrolled in college full-time who were employed in October, by race/ethnicity and hours worked per week: 1973–1990

Year	All students			White			Black			Hispanic		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	36.4	16.8	4.4	37.6	17.4	4.3	27.7	14.2	5.8	34.8	13.8	3.3
1974	36.6	17.0	4.7	38.2	17.4	4.7	23.2	13.0	5.0	34.4	15.8	6.8
1975	35.2	16.6	4.6	36.3	17.0	4.6	23.8	13.0	4.7	39.0	17.5	4.5
1976	37.5	16.9	4.0	39.6	17.7	3.9	22.7	11.9	4.7	35.4	14.8	3.1
1977	38.8	18.1	4.2	40.9	18.9	4.0	20.8	10.5	5.3	42.9	23.5	4.6
1978	39.9	19.0	4.7	41.8	19.7	4.7	22.2	11.7	4.7	53.2	26.8	7.4
1979	38.1	18.0	4.0	40.0	18.4	3.9	24.8	13.9	5.4	35.6	20.4	5.2
1980	40.0	17.9	3.8	42.1	18.3	3.8	24.0	12.2	5.1	41.4	26.6	4.5
1981	39.3	18.7	4.2	41.6	19.5	4.1	23.8	11.7	3.8	39.2	21.9	5.9
1982	39.9	18.5	3.1	42.4	19.6	3.0	26.2	12.2	4.3	33.1	14.1	1.6
1983	40.4	18.8	3.8	42.7	19.3	4.0	28.5	16.0	2.2	33.7	20.2	5.6
1984	42.1	21.0	4.2	44.7	22.0	4.3	25.2	14.8	3.2	34.8	19.7	4.1
1985	44.2	21.5	4.3	47.4	22.6	4.4	24.1	16.0	4.9	43.5	23.2	3.5
1986	43.0	21.9	4.3	46.3	23.5	4.7	24.7	14.2	3.9	40.5	22.6	2.1
1987	44.2	22.3	4.3	45.7	22.8	4.0	31.7	15.8	4.3	52.1	31.8	7.6
1988	46.5	24.5	4.7	48.9	25.1	5.0	31.8	18.6	3.3	40.9	28.7	6.7
1989	46.5	25.2	5.4	48.8	25.6	5.6	29.3	18.5	4.3	49.6	33.8	6.0
1990	45.7	24.1	4.8	48.6	25.1	5.2	29.8	17.1	2.8	45.7	28.0	6.7

* Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-3 Percentage of students 16 to 24 years old enrolled in college full-time who were employed in October, by sex and hours worked per week: 1973–1990

Year	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	36.4	16.8	4.4	39.2	21.0	6.1	32.9	11.5	2.3
1974	36.6	17.0	4.7	37.5	19.0	6.1	35.4	14.7	3.1
1975	35.2	16.6	4.6	34.7	18.2	5.9	35.8	14.7	3.1
1976	37.5	16.9	4.0	39.1	20.0	5.1	35.9	13.6	2.9
1977	38.8	18.1	4.2	38.7	19.3	5.9	39.0	16.9	2.3
1978	39.9	19.0	4.7	39.6	20.6	5.8	40.3	17.2	3.4
1979	38.1	18.0	4.0	36.7	19.3	4.6	39.5	16.6	3.4
1980	40.0	17.9	3.8	39.4	19.0	4.4	40.7	16.7	3.2
1981	39.3	18.7	4.2	38.3	19.7	4.4	40.4	17.7	3.9
1982	39.9	18.5	3.1	38.8	19.2	3.2	41.0	17.7	2.9
1983	40.4	18.8	3.8	40.0	20.6	4.7	40.8	17.0	2.9
1984	42.1	21.0	4.2	40.6	21.6	5.3	43.6	20.2	3.1
1985	44.2	21.5	4.3	42.4	22.1	4.9	46.0	20.9	3.7
1986	43.0	21.9	4.3	43.2	22.9	4.5	42.8	20.8	4.1
1987	44.2	22.3	4.3	43.6	22.7	4.8	44.9	21.8	3.6
1988	46.5	24.5	4.7	44.3	24.7	5.1	48.7	24.3	4.3
1989	46.5	25.2	5.4	44.3	25.4	5.8	48.6	24.9	4.9
1990	45.7	24.1	4.8	43.1	23.2	5.0	48.3	25.0	4.6

* Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-4 Percentage of students 16 to 24 years old enrolled in college part-time who were employed in October, by race/ethnicity and hours worked per week: 1973–1990

Year	All students			White			Black			Hispanic		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	85.3	76.8	52.5	86.6	77.9	53.5	70.7	66.7	42.7	92.5	82.5	55.0
1974	84.4	77.2	61.0	85.7	77.8	60.4	74.2	70.8	64.0	80.6	77.4	62.9
1975	80.8	72.1	52.6	82.4	74.1	55.1	76.0	62.5	41.3	68.3	57.1	39.7
1976	84.6	76.1	53.0	85.6	77.4	53.2	72.3	66.0	58.5	81.5	69.2	40.0
1977	83.4	75.3	53.1	86.0	77.4	54.7	65.9	61.1	44.4	77.8	74.1	51.9
1978	86.1	76.6	53.9	88.0	78.3	55.7	65.2	51.7	29.2	82.3	75.9	63.3
1979	86.9	78.8	56.6	89.2	80.8	58.2	73.5	66.3	49.0	75.0	68.3	46.7
1980	85.2	75.7	53.0	87.3	77.6	55.0	72.5	58.8	36.3	76.5	71.6	50.6
1981	85.7	76.0	51.4	87.2	77.8	52.0	75.4	61.0	41.5	84.1	79.7	50.7
1982	81.1	69.7	48.1	84.4	72.3	50.0	62.5	58.1	33.1	80.6	68.9	49.5
1983	81.7	74.8	48.1	86.6	79.2	51.9	49.2	47.5	23.8	74.0	68.0	45.0
1984	84.9	77.7	55.2	87.1	79.3	57.8	67.7	63.4	45.3	89.6	83.1	50.6
1985	85.9	79.0	52.2	87.9	81.7	56.2	71.8	66.4	42.0	85.2	70.4	28.4
1986	87.2	78.0	54.4	90.0	81.0	57.4	77.0	73.8	44.3	81.0	64.3	43.7
1987	85.4	77.4	49.5	87.2	79.2	51.4	70.9	65.8	37.3	86.5	77.4	54.1
1988	88.3	81.6	54.2	90.4	84.5	55.7	78.1	68.6	48.6	83.9	72.9	52.5
1989	87.2	80.8	55.4	89.8	83.2	58.3	73.2	67.5	43.1	85.1	79.3	55.4
1990	83.7	78.7	52.7	86.8	80.5	55.3	76.9	76.3	49.5	81.8	77.7	50.4

* Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-5 Percentage of students 16 to 24 years old enrolled in college part-time who were employed in October, by sex and hours worked per week: 1973–1990

Year	All students			Male			Female		
	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours	Total*	20 or more hours	35 or more hours
1973	85.3	76.8	52.5	86.3	78.9	57.5	84.4	74.8	47.3
1974	84.4	77.2	61.0	88.3	82.1	65.8	80.7	72.5	56.5
1975	80.8	72.1	52.6	82.5	74.1	55.3	79.1	70.0	49.9
1976	84.6	76.1	53.0	84.0	76.4	56.2	85.3	75.9	50.3
1977	83.4	75.3	53.1	86.3	78.4	57.0	80.6	72.3	49.5
1978	86.1	76.6	53.9	88.6	80.4	61.6	83.8	72.8	47.0
1979	86.9	78.8	56.6	90.4	82.3	60.4	83.9	76.2	53.6
1980	85.2	75.7	53.0	86.5	80.2	58.2	84.2	72.3	49.1
1981	85.7	76.0	51.4	88.5	78.0	57.2	83.3	74.3	46.4
1982	81.1	69.7	48.1	79.8	70.2	50.7	82.1	69.4	46.2
1983	81.7	74.8	48.1	84.0	78.3	52.5	79.5	71.3	43.8
1984	84.9	77.7	55.2	90.0	82.0	60.1	80.6	74.2	51.2
1985	85.9	79.0	52.2	85.9	80.0	53.6	85.7	78.3	51.2
1986	87.2	78.0	54.4	87.8	81.7	59.0	86.9	75.3	50.9
1987	85.4	77.4	49.5	86.9	78.8	50.4	84.3	76.2	48.8
1988	88.3	81.6	54.2	87.4	82.1	56.1	89.2	81.3	52.7
1989	87.2	80.8	55.4	88.1	82.6	60.1	86.7	79.4	52.0
1990	83.7	78.7	52.7	86.4	82.6	55.4	81.3	75.4	50.5

* Includes those with a job but not at work during the survey week.

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-6 Standard errors for estimated percentages in text table for *Indicator 45*

Year	All students			White			Black			Hispanic		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	0.8	0.6	0.3	0.9	0.7	0.3	1.7	1.2	0.6	5.1	3.5	2.2
1974	0.8	0.6	0.3	0.9	0.7	0.3	1.8	1.4	0.7	4.6	3.4	1.8
1975	0.8	0.5	0.3	0.9	0.7	0.3	1.6	1.0	0.5	4.2	3.1	1.8
1976	0.8	0.6	0.3	0.9	0.7	0.3	1.6	1.1	0.7	4.2	3.2	1.7
1977	0.8	0.6	0.3	0.9	0.7	0.3	1.6	1.1	0.6	4.5	3.7	2.2
1978	0.8	0.6	0.3	0.9	0.7	0.3	1.8	1.2	0.6	4.9	4.0	1.9
1979	0.8	0.6	0.3	0.9	0.7	0.3	1.7	1.1	0.5	4.5	3.4	2.0
1980	0.8	0.6	0.2	0.9	0.7	0.3	1.7	1.1	0.7	4.4	3.2	2.2
1981	0.8	0.5	0.2	0.9	0.7	0.3	1.5	1.0	0.5	4.0	3.0	1.4
1982	0.8	0.5	0.2	1.0	0.7	0.3	1.5	0.8	0.1	3.7	2.5	1.3
1983	0.8	0.5	0.2	1.0	0.7	0.3	1.3	0.8	0.2	4.1	3.2	1.8
1984	0.8	0.6	0.2	1.0	0.7	0.2	1.8	1.2	0.4	4.5	3.2	2.0
1985	0.8	0.6	0.2	1.0	0.7	0.3	1.8	1.2	0.3	3.7	2.6	0.7
1986	0.8	0.6	0.2	1.0	0.8	0.3	1.8	1.3	0.5	4.2	3.5	1.2
1987	0.8	0.6	0.2	1.0	0.8	0.3	2.0	1.4	0.6	4.0	2.9	1.5
1988	0.9	0.7	0.2	1.1	0.8	0.3	2.2	1.5	0.6	4.7	3.4	1.8
1989	1.0	0.7	0.3	1.2	0.9	0.3	2.3	1.5	0.6	4.6	3.8	2.3
1990	0.9	0.6	0.3	1.2	0.8	0.3	2.1	1.2	0.6	4.2	3.3	2.0

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-7 Standard errors for estimated percentages in table 45-1

Year	All students			Male			Female		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	0.8	0.6	0.3	1.1	0.9	0.5	1.1	0.7	0.3
1974	0.8	0.6	0.3	1.1	0.9	0.5	1.1	0.7	0.3
1975	0.8	0.5	0.3	1.1	0.8	0.4	1.1	0.7	0.3
1976	0.8	0.6	0.3	1.1	0.8	0.4	1.1	0.7	0.3
1977	0.8	0.6	0.3	1.1	0.9	0.5	1.1	0.8	0.3
1978	0.8	0.6	0.3	1.1	0.9	0.4	1.1	0.8	0.3
1979	0.8	0.6	0.3	1.1	0.9	0.4	1.1	0.8	0.3
1980	0.8	0.6	0.2	1.1	0.8	0.4	1.1	0.8	0.3
1981	0.8	0.5	0.2	1.1	0.8	0.4	1.1	0.7	0.3
1982	0.8	0.5	0.2	1.1	0.8	0.4	1.2	0.7	0.2
1983	0.8	0.5	0.2	1.1	0.7	0.3	1.2	0.8	0.3
1984	0.8	0.6	0.2	1.1	0.8	0.3	1.2	0.8	0.2
1985	0.8	0.6	0.2	1.2	0.8	0.3	1.2	0.8	0.2
1986	0.8	0.6	0.2	1.1	0.8	0.4	1.2	0.9	0.3
1987	0.8	0.6	0.2	1.1	0.9	0.4	1.2	0.8	0.3
1988	0.9	0.7	0.2	1.3	1.0	0.4	1.4	0.9	0.3
1989	1.0	0.7	0.3	1.3	1.0	0.4	1.4	1.0	0.3
1990	0.9	0.6	0.3	1.3	0.9	0.4	1.3	0.9	0.4

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-8 Standard errors for estimated percentages in table 45-2

Year	All students			White			Black			Hispanic		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	0.9	0.7	0.4	1.0	0.8	0.4	3.5	2.8	1.8	8.3	6.0	3.1
1974	0.9	0.7	0.4	1.0	0.8	0.4	3.2	2.6	1.7	7.5	5.8	4.0
1975	0.9	0.7	0.4	1.0	0.8	0.4	3.0	2.4	1.5	7.3	5.7	3.1
1976	0.9	0.7	0.4	1.0	0.8	0.4	2.7	2.1	1.4	7.0	5.2	2.6
1977	0.9	0.7	0.4	1.0	0.8	0.4	2.8	2.1	1.5	7.6	6.6	3.2
1978	0.9	0.7	0.4	1.0	0.8	0.4	2.8	2.2	1.4	8.6	7.7	4.5
1979	0.9	0.7	0.4	1.0	0.8	0.4	2.9	2.3	1.5	7.2	6.1	3.3
1980	0.9	0.7	0.4	1.0	0.8	0.4	2.9	2.2	1.5	7.5	6.7	3.2
1981	0.9	0.7	0.4	1.0	0.8	0.4	2.8	2.1	1.3	6.9	5.8	3.3
1982	0.9	0.7	0.3	1.0	0.8	0.4	3.1	2.3	1.4	7.5	5.6	2.0
1983	0.9	0.8	0.4	1.0	0.8	0.4	3.2	2.6	1.0	7.3	6.2	3.6
1984	0.9	0.8	0.4	1.0	0.9	0.4	3.0	2.5	1.2	7.1	5.9	2.9
1985	0.9	0.8	0.4	1.1	0.9	0.4	3.1	2.7	1.6	7.1	6.0	2.6
1986	1.0	0.8	0.4	1.1	0.9	0.5	3.0	2.4	1.3	6.8	5.8	2.0
1987	1.0	0.8	0.4	1.1	0.9	0.4	3.2	2.5	1.4	6.9	6.5	3.7
1988	1.0	0.9	0.4	1.2	1.0	0.5	3.5	2.9	1.3	7.3	6.7	3.7
1989	1.0	0.9	0.5	1.1	1.0	0.5	3.3	2.8	1.5	7.3	6.9	3.5
1990	1.0	0.9	0.4	1.1	1.0	0.5	3.3	2.7	1.2	7.5	6.8	3.8

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-9 Standard errors for estimated percentages in table 45-3

Year	All students			Male			Female		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	0.9	0.7	0.4	1.3	1.1	0.6	1.4	0.9	0.4
1974	0.9	0.7	0.4	1.3	1.0	0.6	1.4	1.0	0.5
1975	0.9	0.7	0.4	1.2	1.0	0.6	1.3	1.0	0.5
1976	0.9	0.7	0.4	1.2	1.0	0.6	1.3	0.9	0.4
1977	0.9	0.7	0.4	1.3	1.0	0.6	1.3	1.0	0.4
1978	0.9	0.7	0.4	1.3	1.1	0.6	1.3	1.0	0.5
1979	0.9	0.7	0.4	1.3	1.0	0.6	1.3	1.0	0.5
1980	0.9	0.7	0.4	1.3	1.0	0.5	1.3	1.0	0.5
1981	0.9	0.7	0.4	1.2	1.0	0.5	1.3	1.0	0.5
1982	0.9	0.7	0.3	1.3	1.1	0.5	1.3	1.0	0.5
1983	0.9	0.8	0.4	1.3	1.1	0.6	1.3	1.0	0.5
1984	0.9	0.8	0.4	1.3	1.1	0.6	1.4	1.1	0.5
1985	0.9	0.8	0.4	1.3	1.1	0.6	1.4	1.1	0.5
1986	1.0	0.8	0.4	1.4	1.2	0.6	1.4	1.1	0.5
1987	1.0	0.8	0.4	1.3	1.1	0.6	1.4	1.1	0.5
1988	1.0	0.9	0.4	1.5	1.3	0.7	1.4	1.2	0.6
1989	1.0	0.9	0.5	1.5	1.3	0.7	1.4	1.2	0.6
1990	1.0	0.9	0.4	1.4	1.2	0.6	1.4	1.2	0.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-10 Standard errors for estimated percentages in table 45-4

Year	All students			White			Black			Hispanic		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	1.7	2.0	2.4	1.8	2.1	2.6	8.8	9.1	9.6	9.8	14.2	18.5
1974	1.6	1.8	2.1	1.7	2.0	2.3	7.8	8.1	8.5	11.8	12.5	14.5
1975	1.7	1.9	2.1	1.8	2.0	2.3	7.0	8.0	8.1	13.8	14.7	14.5
1976	1.5	1.8	2.1	1.6	1.9	2.2	7.7	8.2	8.5	11.3	13.5	14.3
1977	1.5	1.8	2.0	1.6	1.9	2.2	7.2	7.4	7.5	13.5	14.2	16.2
1978	1.4	1.8	2.1	1.5	1.9	2.3	8.6	9.0	8.2	10.2	11.5	12.9
1979	1.4	1.7	2.1	1.4	1.8	2.2	7.6	8.1	8.6	13.3	14.3	15.4
1980	1.5	1.8	2.1	1.5	1.9	2.3	7.5	8.3	8.1	11.2	11.9	13.2
1981	1.4	1.7	2.0	1.5	1.9	2.2	6.7	7.6	7.7	10.5	11.5	14.3
1982	1.6	1.9	2.1	1.7	2.1	2.4	7.5	7.6	7.2	9.8	11.5	12.4
1983	1.7	1.9	2.2	1.7	2.0	2.4	8.1	8.1	6.9	11.1	11.8	12.5
1984	1.6	1.8	2.2	1.7	2.0	2.4	6.6	6.8	7.0	8.8	10.8	14.4
1985	1.5	1.8	2.2	1.6	1.9	2.5	7.1	7.4	7.7	10.0	12.8	12.6
1986	1.5	1.8	2.2	1.5	2.0	2.5	6.8	7.1	8.1	8.8	10.8	11.1
1987	1.4	1.7	2.0	1.6	1.9	2.3	6.5	6.8	6.9	7.5	9.1	10.9
1988	1.5	1.8	2.3	1.5	1.8	2.5	7.9	8.8	9.5	9.3	11.2	12.6
1989	1.6	1.9	2.4	1.6	2.0	2.7	7.8	8.2	8.7	8.9	10.1	12.4
1990	1.7	1.9	2.3	1.9	2.2	2.7	6.0	6.1	7.2	9.6	10.4	12.5

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 45-11 Standard errors for estimated percentages in table 45-5

Year	All students			Male			Female		
	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours	Total	20 or more hours	35 or more hours
1973	1.7	2.0	2.4	2.3	2.7	3.3	2.5	3.0	3.4
1974	1.6	1.8	2.1	2.0	2.4	3.0	2.4	2.7	3.0
1975	1.7	1.9	2.1	2.3	2.6	3.0	2.4	2.7	3.0
1976	1.5	1.8	2.1	2.2	2.6	3.0	2.0	2.4	2.8
1977	1.5	1.8	2.0	2.0	2.4	2.9	2.3	2.6	2.9
1978	1.4	1.8	2.1	1.9	2.4	3.0	2.1	2.6	2.9
1979	1.4	1.7	2.1	1.8	2.4	3.0	2.1	2.4	2.8
1980	1.5	1.8	2.1	2.2	2.5	3.1	2.0	2.5	2.7
1981	1.4	1.7	2.0	1.9	2.5	2.9	2.1	2.4	2.8
1982	1.6	1.9	2.1	2.5	2.9	3.1	2.1	2.6	2.8
1983	1.7	1.9	2.2	2.3	2.5	3.1	2.5	2.8	3.0
1984	1.6	1.8	2.2	1.9	2.5	3.2	2.3	2.6	2.9
1985	1.5	1.8	2.2	2.3	2.7	3.3	2.1	2.4	2.9
1986	1.5	1.8	2.2	2.1	2.5	3.2	2.0	2.5	2.9
1987	1.4	1.7	2.0	2.0	2.4	3.0	2.0	2.3	2.7
1988	1.5	1.8	2.3	2.2	2.6	3.3	1.9	2.4	3.1
1989	1.6	1.9	2.4	2.4	2.8	3.6	2.1	2.5	3.1
1990	1.7	1.9	2.3	2.3	2.6	3.4	2.5	2.7	3.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Survey.

Table 46-1 Age distribution of *all* undergraduate students 16 years old and over, by type of college: 1976 and 1978–1990

(Percent)

Year	Total	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
				All colleges			
1976	100.0	35.8	26.3	13.6	10.8	5.6	7.9
1978	100.0	35.5	25.1	13.8	10.5	6.4	8.7
1979	100.0	34.3	25.2	14.2	10.5	6.2	9.7
1980	100.0	34.4	25.9	14.3	10.7	6.6	8.1
1981	100.0	32.9	25.3	14.7	10.5	7.7	8.8
1982	100.0	32.0	26.8	15.4	11.2	6.4	8.1
1983	100.0	32.3	24.9	14.9	12.0	7.0	8.9
1984	100.0	31.5	26.0	15.7	11.6	6.9	8.3
1985	100.0	31.3	25.7	14.7	11.9	6.9	9.5
1986	100.0	31.4	22.9	15.8	11.7	7.6	10.6
1987	100.0	31.9	25.1	14.7	10.7	7.2	10.4
1988	100.0	30.5	24.9	15.1	10.2	7.4	11.9
1989	100.0	30.4	23.7	15.6	11.0	7.1	12.2
1990	100.0	28.7	24.7	15.1	11.3	7.3	12.8
				4-year colleges			
1976	100.0	36.9	32.2	14.1	8.2	3.9	4.7
1978	100.0	35.7	30.9	14.4	8.8	4.8	5.4
1979	100.0	34.4	31.1	14.6	8.8	4.9	6.3
1980	100.0	33.6	32.8	14.9	8.7	4.7	5.2
1981	100.0	32.1	30.2	16.1	9.2	6.1	6.3
1982	100.0	31.9	32.6	16.1	9.1	4.6	5.7
1983	100.0	32.2	29.6	17.0	10.1	4.9	6.2
1984	100.0	31.0	31.1	16.9	10.0	5.1	5.9
1985	100.0	31.7	30.9	15.9	10.4	4.7	6.4
1986	100.0	31.7	27.6	17.7	9.3	6.5	7.1
1987	100.0	32.6	29.5	15.8	9.3	5.7	7.1
1988	100.0	31.0	29.2	16.3	9.2	5.4	8.9
1989	100.0	31.3	28.1	16.9	9.8	5.1	8.9
1990	100.0	29.9	28.7	16.9	10.0	5.4	9.1
				2-year colleges			
1976	100.0	31.6	15.4	12.8	16.4	8.5	15.3
1978	100.0	33.1	14.6	13.4	13.8	9.1	16.1
1979	100.0	32.0	13.8	14.0	14.0	8.7	17.4
1980	100.0	34.6	14.5	13.4	13.7	9.4	14.4
1981	100.0	33.8	16.7	12.2	12.7	10.0	14.5
1982	100.0	31.4	17.4	14.2	14.7	9.1	13.2
1983	100.0	30.6	17.3	11.8	15.5	10.2	14.6
1984	100.0	31.0	16.4	13.8	14.8	10.0	14.0
1985	100.0	28.9	16.8	12.1	14.9	10.7	16.6
1986	100.0	29.9	14.8	12.5	15.9	9.6	17.3
1987	100.0	30.5	17.1	12.5	13.3	10.1	16.6
1988	100.0	29.5	17.3	12.9	12.1	10.8	17.3
1989	100.0	28.9	15.4	12.9	13.3	10.9	18.6
1990	100.0	26.7	17.4	12.0	13.7	10.6	19.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-2 Age distribution of *full-time* undergraduate students 16 years old and over, by type of college: 1976 and 1978–1990

(Percent)

Year	Total	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
				All colleges			
1976	100.0	45.4	31.2	12.6	6.6	2.0	2.1
1978	100.0	45.6	30.5	13.0	6.0	2.8	2.1
1979	100.0	45.2	31.3	12.8	5.8	2.4	2.5
1980	100.0	44.8	32.7	12.6	5.4	2.4	2.2
1981	100.0	42.9	31.1	14.2	5.9	2.9	2.9
1982	100.0	41.3	32.9	14.1	6.8	2.7	2.3
1983	100.0	41.9	30.8	14.4	7.1	3.3	2.4
1984	100.0	40.7	31.8	15.3	7.1	2.8	2.4
1985	100.0	41.1	31.9	14.5	6.9	3.1	2.5
1986	100.0	42.1	28.9	15.5	6.9	3.0	3.5
1987	100.0	41.8	31.5	14.5	6.2	2.7	3.4
1988	100.0	40.3	31.3	14.9	6.2	3.3	3.9
1989	100.0	40.9	30.2	15.3	5.9	3.0	4.7
1990	100.0	38.3	30.7	15.3	7.2	3.6	4.8
				4-year colleges			
1976	100.0	42.9	36.3	12.9	5.3	1.4	1.2
1978	100.0	41.7	34.9	13.9	5.5	2.5	1.5
1979	100.0	42.0	35.8	13.6	4.9	1.8	1.9
1980	100.0	40.1	38.3	13.4	5.0	1.8	1.5
1981	100.0	38.8	35.0	16.1	5.4	2.8	1.9
1982	100.0	38.0	37.5	15.1	5.6	2.0	1.6
1983	100.0	38.0	34.4	16.6	6.6	2.4	1.9
1984	100.0	37.2	36.1	16.8	6.1	2.2	1.6
1985	100.0	37.8	36.1	15.8	6.2	2.2	1.9
1986	100.0	38.9	32.7	17.1	6.2	2.4	2.6
1987	100.0	39.5	34.8	15.6	5.6	2.0	2.5
1988	100.0	37.3	34.8	16.2	6.0	2.7	2.9
1989	100.0	38.1	32.9	17.2	5.6	2.3	3.8
1990	100.0	36.6	34.1	16.6	6.4	2.7	3.6
				2-year colleges			
1976	100.0	50.6	17.3	11.7	11.3	3.8	5.3
1978	100.0	55.4	17.4	11.2	8.1	3.9	4.1
1979	100.0	53.2	17.9	11.1	8.7	4.3	4.8
1980	100.0	56.5	18.3	10.2	6.8	3.8	4.3
1981	100.0	51.9	20.0	9.5	7.2	5.4	5.9
1982	100.0	49.8	21.5	12.1	10.4	1.9	4.3
1983	100.0	50.1	21.9	9.4	8.6	6.0	4.0
1984	100.0	48.7	19.8	11.4	10.1	4.8	5.3
1985	100.0	48.2	21.1	10.8	9.2	5.9	4.9
1986	100.0	50.7	18.3	10.6	9.0	4.8	6.7
1987	100.0	48.9	21.4	11.2	7.9	4.5	6.1
1988	100.0	48.7	21.6	11.0	6.9	5.1	6.7
1989	100.0	49.8	21.3	9.3	6.9	5.3	7.4
1990	100.0	43.3	20.9	11.6	9.7	6.2	8.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-3 Age distribution of *part-time* undergraduate students 16 years old and over, by type of college: 1976 and 1978–1990

(Percent)

Year	Total	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
				All colleges			
1976	100.0	10.3	13.2	16.3	21.8	15.1	23.3
1978	100.0	11.5	12.4	15.7	21.1	14.8	24.5
1979	100.0	9.5	11.2	17.3	21.2	14.7	26.1
1980	100.0	10.1	10.3	18.2	23.1	16.4	21.9
1981	100.0	9.8	11.8	15.8	21.3	18.7	22.6
1982	100.0	10.2	12.6	18.5	21.5	15.2	21.9
1983	100.0	10.2	11.3	16.1	23.2	15.4	23.8
1984	100.0	9.5	11.9	16.6	22.6	16.7	22.7
1985	100.0	8.8	11.5	15.0	23.4	15.6	25.7
1986	100.0	8.6	10.1	16.5	21.9	17.2	25.8
1987	100.0	11.6	12.0	14.9	20.0	16.6	24.9
1988	100.0	9.1	11.0	15.5	18.9	16.2	29.3
1989	100.0	7.7	9.6	16.1	21.9	15.9	28.8
1990	100.0	8.0	11.6	14.7	20.2	15.2	30.3
				4-year colleges			
1976	100.0	9.2	13.0	19.6	21.7	15.5	20.9
1978	100.0	9.4	13.3	16.5	23.3	15.0	22.5
1979	100.0	5.0	12.6	18.4	23.8	16.7	23.5
1980	100.0	6.5	9.9	21.4	24.4	17.1	20.6
1981	100.0	5.3	11.2	16.4	24.2	19.4	23.4
1982	100.0	6.5	11.8	20.5	23.3	15.2	22.7
1983	100.0	7.8	9.5	18.5	24.8	15.6	23.8
1984	100.0	6.1	10.8	17.4	25.5	16.9	23.3
1985	100.0	6.0	9.2	16.3	28.1	15.3	25.1
1986	100.0	4.6	8.0	19.7	20.9	22.2	24.5
1987	100.0	8.3	10.4	16.6	22.6	18.6	23.5
1988	100.0	6.9	8.1	16.5	21.3	15.7	31.6
1989	100.0	4.8	9.1	15.9	25.8	15.7	28.7
1990	100.0	4.5	8.4	17.9	23.6	15.5	29.8
				2-year colleges			
1976	100.0	10.5	13.4	13.9	22.1	13.8	26.3
1978	100.0	12.5	12.0	15.4	19.0	14.0	27.1
1979	100.0	12.3	10.1	16.7	19.0	12.8	29.2
1980	100.0	12.5	10.5	16.5	20.7	15.1	24.6
1981	100.0	13.6	13.0	15.3	18.9	15.1	24.0
1982	100.0	12.1	13.1	16.5	19.2	16.6	22.4
1983	100.0	11.3	12.8	14.2	22.2	14.4	25.1
1984	100.0	12.0	12.7	16.4	19.9	15.5	23.5
1985	100.0	10.6	12.7	13.4	20.2	15.4	27.6
1986	100.0	11.4	11.7	14.2	22.1	14.0	26.7
1987	100.0	14.1	13.3	13.7	18.1	15.0	25.9
1988	100.0	10.7	13.2	14.8	17.1	16.5	27.7
1989	100.0	9.9	9.9	16.1	19.1	16.1	28.8
1990	100.0	10.5	14.0	12.3	17.7	15.0	30.6

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-4 Part-time attendance status of undergraduates 16 to 34 years old, by age and type of college: 1973–1990

Year	16-34 years old			16-24 years old			25-34 years old		
	Total	4-year	2-year	Total	4-year	2-year	Total	4-year	2-year
	Percent part time								
1973	19.7	12.4	38.8	12.3	7.6	26.7	61.2	49.4	75.2
1974	22.5	14.9	40.3	14.3	9.5	28.0	61.5	51.2	73.1
1975	22.4	14.2	38.8	14.1	8.0	28.5	57.4	51.7	63.5
1976	22.9	14.7	41.3	14.5	8.9	30.1	61.7	54.4	68.2
1977	24.9	15.2	45.3	15.5	8.4	34.1	63.6	55.2	71.9
1978	24.4	15.0	45.3	15.7	8.9	34.1	62.9	51.9	75.1
1979	24.9	16.7	44.4	15.7	9.2	33.8	65.8	60.6	72.4
1980	25.6	16.1	43.8	15.6	8.9	31.5	68.6	59.4	76.8
1981	25.6	16.5	41.9	15.4	8.5	31.5	66.3	57.6	70.7
1982	25.3	15.9	43.7	16.6	9.3	32.4	62.2	54.7	73.7
1983	25.3	15.7	44.1	15.8	8.8	32.2	61.6	51.8	71.7
1984	24.7	16.2	42.7	15.2	8.6	32.2	62.2	55.8	68.8
1985	24.8	15.4	44.5	14.9	7.7	32.6	62.8	55.0	71.3
1986	26.6	16.9	46.9	16.1	8.7	34.5	64.9	56.5	74.6
1987	27.5	18.0	47.0	17.7	9.9	36.1	67.0	60.1	75.0
1988	25.4	15.7	44.1	16.0	8.6	32.6	62.9	53.0	74.1
1989	25.4	16.1	45.9	15.0	8.0	33.0	66.0	57.4	76.1
1990	25.3	16.2	43.8	15.8	8.6	33.3	60.1	53.3	67.9

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-5 Attendance status and level of college students 16 to 34 years old: 1967–1990

Year	Percent enrolled part time			Percent graduate students		
	Total	Undergraduate	Graduate	Total	Full time	Part time
1967	22.3	17.5	49.0	15.0	9.9	33.1
1968	21.2	17.0	47.8	13.9	9.2	31.2
1969	21.9	17.2	47.9	15.3	10.2	33.5
1970	22.3	17.0	51.3	15.4	9.6	35.5
1971	23.3	19.0	48.4	14.7	9.9	30.6
1972	24.1	18.8	51.8	15.9	10.1	34.2
1973	25.6	19.7	54.5	16.9	10.4	36.1
1974	28.1	22.5	55.6	16.9	10.4	33.5
1975	26.7	22.4	49.1	16.4	11.4	30.1
1976	27.9	22.9	52.7	16.9	11.1	31.9
1977	29.6	24.9	51.0	17.7	12.3	30.6
1978	29.1	24.4	51.8	17.1	11.6	30.4
1979	29.8	24.9	53.5	17.0	11.2	30.5
1980	29.8	25.6	50.8	16.6	11.7	28.4
1981	29.5	25.6	50.7	15.7	10.9	26.9
1982	29.2	25.3	48.6	16.6	12.0	27.6
1983	28.8	25.3	45.9	16.8	12.7	26.8
1984	28.0	24.7	44.6	16.6	12.8	26.4
1985	29.0	24.8	50.7	16.1	11.2	28.2
1986	29.2	26.6	43.8	15.4	12.2	23.1
1987	30.8	27.5	48.3	15.5	11.6	24.3
1988	28.9	25.3	50.0	14.6	10.3	25.2
1989	28.5	25.4	45.5	15.5	11.8	24.7
1990	27.8	25.3	43.1	14.3	11.3	22.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-6 Standard errors for estimated percentages in text table for indicator 46

Year	Total			Full-time			Part-time		
	16–21 years old	22–34 years old	35 years old and over	16–21 years old	22–34 years old	35 years old and over	16–21 years old	22–34 years old	35 years old and over
1976	0.7	0.7	0.4	0.8	0.8	0.3	1.1	1.3	1.1
1978	0.8	0.7	0.4	0.8	0.8	0.3	1.1	1.3	1.1
1979	0.7	0.7	0.5	0.8	0.8	0.3	1.0	1.3	1.1
1980	0.7	0.7	0.4	0.8	0.8	0.3	1.0	1.2	1.0
1981	0.7	0.7	0.4	0.8	0.8	0.3	1.0	1.2	1.0
1982	0.7	0.7	0.4	0.8	0.8	0.3	1.0	1.2	1.0
1983	0.8	0.7	0.4	0.9	0.9	0.3	1.0	1.3	1.1
1984	0.8	0.7	0.4	0.9	0.8	0.3	1.1	1.3	1.1
1985	0.8	0.7	0.5	0.9	0.8	0.3	1.0	1.3	1.1
1986	0.8	0.7	0.5	0.9	0.8	0.4	1.0	1.3	1.1
1987	0.8	0.7	0.5	0.8	0.8	0.3	1.1	1.3	1.1
1988	0.7	0.7	0.5	0.8	0.8	0.4	1.0	1.2	1.1
1989	0.8	0.8	0.5	0.9	0.9	0.4	1.1	1.4	1.3
1990	0.8	0.8	0.5	0.9	0.9	0.4	1.1	1.3	1.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-7 Standard errors for estimated percentages in table 46-1

(Percent)

Year	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
			All colleges			
1976	0.7	0.7	0.5	0.5	0.4	0.4
1978	0.7	0.7	0.5	0.5	0.4	0.4
1979	0.7	0.7	0.5	0.5	0.4	0.5
1980	0.7	0.7	0.5	0.5	0.4	0.4
1981	0.7	0.6	0.5	0.4	0.4	0.4
1982	0.7	0.7	0.6	0.5	0.4	0.4
1983	0.7	0.7	0.6	0.5	0.4	0.4
1984	0.7	0.7	0.6	0.5	0.4	0.4
1985	0.7	0.7	0.5	0.5	0.4	0.5
1986	0.7	0.6	0.6	0.5	0.4	0.5
1987	0.7	0.7	0.5	0.5	0.4	0.5
1988	0.7	0.7	0.6	0.5	0.4	0.5
1989	0.7	0.7	0.6	0.5	0.4	0.5
1990	0.7	0.7	0.6	0.5	0.4	0.5
			4-year colleges			
1976	0.9	0.9	0.7	0.5	0.4	0.4
1978	0.9	0.9	0.7	0.5	0.4	0.4
1979	0.9	0.9	0.7	0.5	0.4	0.5
1980	0.9	0.9	0.7	0.5	0.4	0.4
1981	0.9	0.9	0.7	0.5	0.4	0.4
1982	0.9	0.9	0.7	0.6	0.4	0.5
1983	0.9	0.9	0.7	0.6	0.4	0.5
1984	0.9	0.9	0.7	0.6	0.4	0.5
1985	0.9	0.9	0.7	0.6	0.4	0.5
1986	0.9	0.9	0.7	0.6	0.5	0.5
1987	0.9	0.9	0.7	0.5	0.4	0.5
1988	0.9	0.9	0.8	0.6	0.5	0.6
1989	0.9	0.9	0.8	0.6	0.4	0.6
1990	0.9	0.9	0.7	0.6	0.4	0.6
			2-year colleges			
1976	1.3	1.0	0.9	1.0	0.8	1.0
1978	1.3	1.0	0.9	0.9	0.8	1.0
1979	1.3	0.9	0.9	0.9	0.8	1.0
1980	1.2	0.9	0.9	0.9	0.8	0.9
1981	1.2	0.9	0.8	0.8	0.8	0.9
1982	1.2	1.0	0.9	0.9	0.8	0.9
1983	1.2	1.0	0.8	1.0	0.8	0.9
1984	1.3	1.0	0.9	1.0	0.8	0.9
1985	1.2	1.0	0.9	1.0	0.8	1.0
1986	1.2	0.9	0.9	1.0	0.8	1.0
1987	1.2	1.0	0.8	0.9	0.8	1.0
1988	1.2	1.0	0.9	0.9	0.8	1.0
1989	1.3	1.0	0.9	0.9	0.9	1.1
1990	1.2	1.0	0.9	0.9	0.8	1.1

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-8 Standard errors for estimated percentages in table 46-2

(Percent)

Year	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
			All colleges			
1976	0.9	0.8	0.6	0.4	0.3	0.3
1978	0.9	0.8	0.6	0.4	0.3	0.3
1979	0.9	0.8	0.6	0.4	0.3	0.3
1980	0.9	0.9	0.6	0.4	0.3	0.3
1981	0.9	0.8	0.6	0.4	0.3	0.3
1982	0.9	0.9	0.6	0.5	0.3	0.3
1983	0.9	0.9	0.7	0.5	0.3	0.3
1984	0.9	0.9	0.7	0.5	0.3	0.3
1985	0.9	0.9	0.6	0.5	0.3	0.3
1986	0.9	0.8	0.7	0.5	0.3	0.3
1987	0.9	0.9	0.7	0.4	0.3	0.3
1988	1.0	0.9	0.7	0.5	0.4	0.4
1989	1.0	0.9	0.7	0.5	0.3	0.4
1990	0.9	0.9	0.7	0.5	0.4	0.4
			4-year colleges			
1976	1.0	1.0	0.7	0.5	0.2	0.2
1978	1.1	1.0	0.7	0.5	0.3	0.3
1979	1.0	1.0	0.7	0.5	0.3	0.3
1980	1.0	1.0	0.7	0.5	0.3	0.3
1981	1.0	1.0	0.8	0.5	0.3	0.3
1982	1.1	1.1	0.8	0.5	0.3	0.3
1983	1.1	1.0	0.8	0.5	0.3	0.3
1984	1.0	1.0	0.8	0.5	0.3	0.3
1985	1.0	1.0	0.8	0.5	0.3	0.3
1986	1.1	1.0	0.8	0.5	0.3	0.3
1987	1.0	1.0	0.8	0.5	0.3	0.3
1988	1.1	1.1	0.8	0.5	0.4	0.4
1989	1.1	1.1	0.8	0.5	0.3	0.4
1990	1.1	1.1	0.8	0.5	0.4	0.4
			2-year colleges			
1976	1.9	1.4	1.2	1.2	0.7	0.8
1978	1.9	1.5	1.2	1.1	0.8	0.8
1979	1.9	1.5	1.2	1.1	0.8	0.8
1980	1.8	1.4	1.1	0.9	0.7	0.8
1981	1.7	1.4	1.0	0.9	0.8	0.8
1982	1.8	1.5	1.2	1.1	0.5	0.7
1983	1.9	1.5	1.1	1.0	0.9	0.7
1984	1.9	1.5	1.2	1.1	0.8	0.8
1985	1.9	1.6	1.2	1.1	0.9	0.8
1986	1.9	1.5	1.2	1.1	0.8	1.0
1987	1.9	1.5	1.2	1.0	0.8	0.9
1988	1.9	1.6	1.2	1.0	0.8	1.0
1989	2.0	1.7	1.2	1.0	0.9	1.1
1990	1.9	1.5	1.2	1.1	0.9	1.0

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-9 Standard errors for estimated percentages in table 46-3

(Percent)

Year	16–19 years old	20–21 years old	22–24 years old	25–29 years old	30–34 years old	35 years old and over
			All colleges			
1976	0.9	1.0	1.1	1.2	1.0	1.2
1978	0.9	0.9	1.0	1.2	1.0	1.2
1979	0.8	0.9	1.0	1.1	1.0	1.2
1980	0.8	0.8	1.1	1.2	1.0	1.1
1981	0.8	0.9	1.0	1.1	1.0	1.1
1982	0.9	0.9	1.1	1.2	1.0	1.2
1983	0.9	0.9	1.0	1.2	1.0	1.2
1984	0.8	0.9	1.1	1.2	1.1	1.2
1985	0.8	0.9	1.0	1.2	1.0	1.2
1986	0.8	0.8	1.0	1.1	1.0	1.2
1987	0.8	0.9	0.9	1.1	1.0	1.1
1988	0.8	0.9	1.0	1.1	1.1	1.3
1989	0.8	0.9	1.1	1.2	1.1	1.3
1990	0.8	0.9	1.0	1.1	1.0	1.3
			4-year colleges			
1976	1.3	1.5	1.8	1.9	1.6	1.8
1978	1.3	1.5	1.7	1.9	1.6	1.9
1979	0.9	1.4	1.6	1.8	1.6	1.8
1980	1.1	1.3	1.8	1.9	1.7	1.8
1981	0.9	1.3	1.5	1.8	1.6	1.7
1982	1.1	1.4	1.8	1.9	1.6	1.9
1983	1.2	1.3	1.7	1.9	1.6	1.9
1984	1.0	1.4	1.6	1.9	1.6	1.8
1985	1.0	1.3	1.6	2.0	1.6	1.9
1986	0.9	1.2	1.7	1.7	1.8	1.8
1987	1.1	1.2	1.5	1.7	1.6	1.7
1988	1.1	1.2	1.7	1.8	1.6	2.1
1989	0.9	1.3	1.6	1.9	1.6	2.0
1990	0.9	1.2	1.7	1.8	1.6	2.0
			2-year colleges			
1976	1.2	1.3	1.3	1.6	1.3	1.7
1978	1.2	1.2	1.3	1.5	1.3	1.7
1979	1.2	1.1	1.4	1.5	1.3	1.7
1980	1.2	1.1	1.4	1.5	1.3	1.6
1981	1.3	1.2	1.3	1.4	1.3	1.6
1982	1.2	1.3	1.4	1.5	1.4	1.6
1983	1.2	1.2	1.3	1.5	1.3	1.6
1984	1.3	1.3	1.5	1.6	1.4	1.7
1985	1.2	1.2	1.3	1.5	1.3	1.7
1986	1.2	1.2	1.3	1.5	1.3	1.6
1987	1.2	1.2	1.2	1.4	1.3	1.5
1988	1.2	1.3	1.4	1.4	1.4	1.7
1989	1.1	1.2	1.4	1.5	1.4	1.7
1990	1.1	1.3	1.2	1.4	1.3	1.7

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-10 Standard errors for estimated percentages in table 46-4

Year	16-34 years old			16-24 years old			25-34 years old		
	Total	4-year	2-year	Total	4-year	2-year	Total	4-year	2-year
	Percent part time								
1973	0.7	0.7	1.7	0.6	0.6	1.7	2.2	3.1	2.9
1974	0.7	0.7	1.6	0.6	0.6	1.7	2.0	2.8	2.7
1975	0.7	0.7	1.4	0.6	0.6	1.5	1.8	2.7	2.5
1976	0.7	0.7	1.4	0.6	0.6	1.6	1.8	2.7	2.5
1977	0.7	0.7	1.4	0.6	0.6	1.6	1.7	2.6	2.4
1978	0.7	0.7	1.5	0.7	0.6	1.6	1.8	2.6	2.4
1979	0.7	0.7	1.5	0.6	0.6	1.7	1.8	2.5	2.5
1980	0.7	0.7	1.4	0.6	0.6	1.5	1.7	2.6	2.3
1981	0.7	0.7	1.3	0.6	0.6	1.5	1.6	2.3	2.4
1982	0.7	0.7	1.4	0.7	0.6	1.5	1.8	2.7	2.4
1983	0.7	0.7	1.4	0.7	0.6	1.6	1.7	2.5	2.3
1984	0.7	0.7	1.5	0.7	0.6	1.6	1.8	2.5	2.5
1985	0.7	0.7	1.5	0.6	0.6	1.7	1.7	2.5	2.4
1986	0.7	0.8	1.4	0.7	0.6	1.7	1.7	2.4	2.3
1987	0.7	0.8	1.4	0.7	0.6	1.6	1.7	2.4	2.3
1988	0.8	0.8	1.5	0.7	0.7	1.6	1.9	2.7	2.5
1989	0.8	0.8	1.5	0.7	0.6	1.7	1.8	2.6	2.4
1990	0.7	0.8	1.5	0.7	0.6	1.7	1.8	2.5	2.5

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 46-11 Standard errors for estimated percentages in table 46-5

Year	Percent enrolled part time			Percent graduate students		
	Total	Undergraduate	Graduate	Total	Full-time	Part-time
1967	0.8	0.7	2.3	0.6	0.6	1.8
1968	0.7	0.7	2.3	0.6	0.6	1.8
1969	0.7	0.7	2.1	0.6	0.6	1.7
1970	0.7	0.7	2.1	0.6	0.6	1.7
1971	0.7	0.7	2.1	0.6	0.5	1.5
1972	0.7	0.7	2.0	0.6	0.5	1.5
1973	0.7	0.7	1.9	0.6	0.6	1.5
1974	0.7	0.7	1.9	0.6	0.6	1.4
1975	0.6	0.7	1.8	0.5	0.5	1.3
1976	0.6	0.7	1.8	0.5	0.5	1.3
1977	0.7	0.7	1.7	0.6	0.6	1.2
1978	0.7	0.7	1.8	0.6	0.6	1.3
1979	0.7	0.7	1.8	0.5	0.6	1.2
1980	0.7	0.7	1.8	0.5	0.6	1.2
1981	0.6	0.7	1.8	0.5	0.5	1.2
1982	0.7	0.7	1.8	0.5	0.6	1.2
1983	0.7	0.7	1.8	0.6	0.6	1.2
1984	0.7	0.7	1.8	0.6	0.6	1.2
1985	0.7	0.7	1.8	0.5	0.6	1.2
1986	0.7	0.7	1.9	0.5	0.6	1.2
1987	0.7	0.7	1.9	0.5	0.6	1.1
1988	0.7	0.8	2.1	0.6	0.6	1.3
1989	0.7	0.8	2.0	0.6	0.6	1.3
1990	0.7	0.8	2.1	0.6	0.6	1.2

SOURCE: U.S. Department of Commerce, Bureau of the Census, *Current Population Reports*, P-20 Series, "School Enrollment...," various years; October Current Population Survey.

Table 47-1 Federal on-budget support for education (in constant 1991 dollars)[1], by category: Fiscal years 1965–1991

Fiscal year	Total (millions)	Elementary and secondary (millions)	Postsecondary (millions)	Other education[2] (millions)	Research at educational institutions (millions)
1965	$24,563	$8,950	$5,518	$1,726	$8,368
1970	45,018	20,954	12,391	3,467	8,207
1975	56,309	25,844	18,230	3,915	8,321
1980	56,041	26,174	17,865	2,529	9,474
1981	53,894	23,517	17,870	3,227	9,280
1982	47,354	20,484	15,009	2,754	9,107
1983	45,950	19,227	14,232	2,917	9,574
1984	46,113	19,531	12,980	3,462	10,139
1985	48,104	20,949	13,580	2,612	10,963
1986	48,093	20,631	13,390	3,170	10,902
1987	48,369	20,702	11,897	3,330	12,441
1988	49,379	21,213	11,905	3,407	12,855
1989	52,600	21,647	14,283	3,490	13,180
1990	53,150	22,682	14,119	3,565	12,784
1991[3]	54,638	24,436	13,702	3,671	12,829

[1] 1991 constant dollars, adjusted using the federal budget composite deflator.

[2] "Other" education programs include libraries, museusms, cultural activities, and miscellaneous research.

[3] Estimates of FY 1991 outlays, provided by U.S Office of Management and Budget and various federal agencies.

NOTE: Other forms of federal support include non-federal funds generated by federal programs and estimated federal tax expenditures for education. See supplemental note to *Indicator 47* for further elaboration.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Federal Support for Education: Fiscal Years 1980 to 1991.*

Table 47-2 Federal on-budget support for education (in constant 1991 dollars)[1], by program and agency: Selected fiscal years 1965–1991

	1965	1970	1975	1980	1985	1988	1989	1990	1991[2]	Percent change 1980–1991
					(millions)					
Total federal on-budget support	$24,563	$45,018	$56,309	$56,041	$48,104	$49,380	$52,600	$53,150	$54,638	-2.5
Elementary/secondary education programs	8,950	20,954	25,844	26,174	20,949	21,213	21,647	22,682	24,436	-6.6
Child nutrition programs (USDA)	823	1,075	3,535	5,515	4,542	4,898	5,000	5,245	5,635	2.2
Grants for the disadvantaged (ED)	0	4,812	4,562	5,233	5,214	4,602	4,593	4,736	5,335	2.0
Education for the handicapped (ED)	64	284	368	1,342	1,262	1,675	2,064	1,704	2,317	72.7
Head Start (HHS)	0	0	983	1,200	1,333	1,378	1,355	1,526	2,056	71.3
Training programs (DOL)	1,060	1,513	2,246	2,254	1,662	1,776	1,646	1,861	1,784	-20.8
School improvement programs (ED)	333	1,036	1,705	1,288	652	507	1,070	1,253	1,556	20.8
Overseas dependents schools (DOD)	336	471	613	553	760	884	901	911	916	65.6
Vocational and adult education (ED)	606	1,205	1,595	1,405	816	1,458	924	1,377	906	-35.5
Impact aid program (ED)	1,611	2,359	1,506	1,127	802	808	829	860	815	-27.7
Job Corps (DOL)	0	0	426	767	750	814	847	779	800	4.3
Social security student benefits (HHS)	369	601	682	558	565	508	514	516	497	-11.3
Other elementary/secondary programs	3,749	7,598	7,622	4,930	2,591	1,904	1,902	1,915	1,818	-63.1
Higher education programs	5,518	12,391	18,230	17,865	13,580	11,905	14,283	14,119	13,702	-23.3
Student financial assistance (ED)	0	0	0	6,014	5,160	5,964	6,431	6,238	5,970	-0.7
Guaranteed student loans (ED)	0	8	270	2,299	4,381	3,176	4,279	4,607	4,201	82.7
All-volunteer-force educational assistance (DOD)	0	0	0	0	0	84	134	284	423	—
Other postsecondary programs	5,518	12,382	17,959	9,551	4,039	2,681	3,438	2,989	3,107	-67.5
Other education programs	1,726	3,467	3,915	2,529	2,612	3,407	3,490	3,565	3,671	45.1
Rehabilitative services and handicapped research (ED)	633	1,700	1,727	697	989	1,756	1,781	1,876	1,921	175.6
Other education programs	1,094	1,767	2,188	1,832	1,623	1,651	1,709	1,689	1,749	-4.5
Research programs at universities and related institutions	8,368	8,207	8,321	9,474	10,963	12,855	13,180	12,784	12,829	35.4
Department of Health and Human Services	2,186	2,242	3,099	3,408	4,001	4,893	4,993	4,990	4,980	46.1
Department of Energy	2,024	1,971	1,853	2,401	2,733	2,686	2,783	2,616	2,596	8.1
Department of Defense	2,013	1,280	888	1,052	1,544	2,171	2,129	1,759	1,693	60.9
National Science Foundation	710	912	1,156	1,215	1,347	1,408	1,474	1,494	1,588	30.8
National Aeronautics and Space Administration	962	927	480	416	602	1,025	1,072	1,151	1,235	197.0
Department of Agriculture	269	233	263	353	363	348	345	365	364	3.0
Other research programs	205	643	581	628	371	324	385	410	374	-40.5

-Not available

[1] 1991 constant dollars, adjusted using the federal budget composite deflator.

[2] Estimates of FY 1991 outlays, provided by U.S Office of Management and Budget and various federal agencies.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Federal Support for Education: Fiscal Years 1980 to 1991.*

Note on federal support for education

On-budget federal funding is provided through programs funded by annual Congressional appropriations. This indicator measures how such funding has grown since 1965 and how its distribution has changed over time among elementary/secondary education programs, postsecondary education programs, research, and other education programs. But on-budget support is only one way in which the federal government financially supports education. *Non-federal funds* and *federal tax expenditures for education* are two others and will be discussed below.

Non-federal funds

Non-federal funds are generated by federal legislation that provides loan guarantees and implicit subsidies to support loan capital raised through various private and public sources. Non-federal funds are also made available for education purposes when federal programs require matching funds or offer incentives and subsidies. Although non-federal funds are not recorded on the federal budget, a contingent federal financial responsibility exists for most of these funds in the form of federal guarantees for student loans made by banks and other lending institutions. Almost all such non-federal education funds go to postsecondary education.

Non-federal funds generated by federal programs showed an increase in real dollars between FY 1980 and FY 1991 (50 percent), but fluctuated throughout the period. These non-federal amounts tend to fluctuate because of changes in interest rates and program legislation, which affect the number and amount of student loans.

For example, the Guaranteed Student Loan (GSL) program, which subsidizes and guarantees low-interest loans to parents and students, has both on-budget and non-federal funding components. The on-budget components are the interest differential paid to the bank both while the student is in school, and while the student is out of school repaying the loan at the subsidized rate. If the student defaults on the loan, there is a second on-budget component, the amount of the loan for which the bank must be reimbursed. The non-federal funds are the amount of the loan on which the student could potentially default. It is this part that represents a contingent liability.

Federal tax expenditures for education

Federal tax expenditures for education are revenue deductions, attributable to provisions of the federal tax laws, that allow a special exclusion, exemption or deduction from gross income or that provide a special credit, a preferential rate of tax, or a deferral of tax liability for personal education expenditure. These benefits provided by the federal government through tax preferences are equivalent to benefits that could be provided in the form of direct federal outlays for education.

Examples of federal tax expenditures are deductions for charitable contributions to educational institutions, the personal exemption status on parents' federal income taxes for dependent students over 19 years of age; and exemptions from federal taxes of interest income from state and local school bonds and from student loan bonds. Federal tax expenditures on education were estimated at $18.1 billion in FY 1990, reflecting a decline of 12 percent since 1980, after adjusting for inflation.

Recipients of federal education support

Not all federal education support goes to schools, colleges, universities or other traditional educational institutions. Some goes directly to students (for out-of-pocket expenses), some to banks (to pay interest subsidies on guaranteed loans), some for direct federal services (such as military academies or overseas dependents' schools), and some to other institutions such as libraries or museums. (For a further discussion of the distribution of federal education support, see *Federal Support for Education: Fiscal Years 1980 to 1991.*)

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Federal Support for Education: Fiscal Years 1980 to 1991.*

Table 48-1 National index of public school revenues per pupil in relation to per capita personal income: Selected school years ending 1930–1991

School year ending	National index	Total education revenues[1] (billions)	Public elementary/ secondary enrollment (millions)	Total education revenues per pupil[1]	Total personal income[2] (billions)	Total population[3] (millions)	Per capita personal income[2]
1930	11.8	$16.0	25.7	$623	$646	121.9	$5,298
1940	16.2	21.2	25.4	835	677	131.0	5,169
1950	15.7	29.8	25.1	1,188	1,133	149.2	7,592
1956	16.6	47.3	30.7	1,541	1,533	165.3	9,275
1958	17.8	56.7	33.0	1,719	1,657	171.3	9,676
1960	19.1	66.3	35.2	1,885	1,757	177.8	9,882
1962	20.2	76.6	37.5	2,045	1,862	183.7	10,137
1964	20.3	87.6	40.2	2,181	2,032	189.2	10,739
1966	21.2	105.1	42.2	2,493	2,289	194.3	11,781
1968	22.4	125.0	43.9	2,847	2,525	198.7	12,705
1970	23.1	143.4	45.6	3,144	2,753	202.7	13,584
1971	23.9	149.8	45.9	3,263	2,799	205.1	13,652
1972	25.2	161.4	46.1	3,501	2,885	207.7	13,892
1973	24.4	162.8	45.7	3,560	3,067	209.9	14,612
1974	24.7	171.4	45.4	3,772	3,242	211.9	15,299
1975	25.3	170.8	45.1	3,790	3,207	213.9	14,995
1976	26.1	172.9	44.8	3,860	3,189	216.0	14,764
1977	25.5	172.9	44.3	3,902	3,332	218.0	15,283
1978	25.6	175.6	43.6	4,029	3,465	220.2	15,735
1979	25.4	176.2	42.6	4,142	3,630	222.6	16,309
1980	25.7	174.4	41.6	4,188	3,662	225.1	16,271
1981	26.1	168.0	40.9	4,105	3,581	227.7	15,725
1982	25.1	158.3	40.0	3,956	3,623	229.9	15,754
1983	25.8	159.1	39.6	4,021	3,616	232.2	15,575
1984	26.5	165.4	39.3	4,213	3,724	234.3	15,893
1985	26.6	172.7	39.2	4,404	3,910	236.3	16,544
1986	27.1	181.1	39.4	4,595	4,039	238.5	16,938
1987	27.2	189.3	39.8	4,753	4,203	240.7	17,466
1988	27.3	195.0	40.0	4,873	4,331	242.8	17,836
1989	28.6	211.3	40.2	5,258	4,498	245.1	18,354
1990	28.9	218.8	40.5	5,399	4,621	247.4	18,682
1991[4]	28.7	220.2	41.2	5,342	4,646	250.0	18,584

[1] In constant 1990-1991 dollars, using the CPI adjusted to a school-year basis.
[2] For the calendar year in which the school year began, in constant 1990 dollars, based on the CPI.
[3] As of July 1, the year in which the school year began.
[4] Revenues and enrollments are from *Early Estimates: Public and Private Elementary and Secondary Education Statistics: School Year 1991-1992.*

NOTE: Data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, tables 3, 35, and 151 (based on Common Core of Data).

Table 48-2 State indices of public school revenues per pupil in relation to per capita personal income: School years ending 1980 and 1991

State	State index		State and local education revenues (thousands) 1990–91	Public elementary/ secondary enrollment 1990–91	Per pupil education revenues	Total personal income (millions) 1990*	Total population (thousands) 1990*	Per capita personal income 1990*
	1980	1991						
U.S. Total	25.7	28.7	$220,220,335	41,223,804	$5,342	$4,645,500	249,975	$18,584
Alabama	19.9	24.1	2,610,994	721,806	3,617	60,776	4,046	15,021
Alaska	34.3	37.1	916,113	113,874	8,045	11,956	551	21,699
Arizona	25.1	29.4	3,011,585	639,853	4,707	58,946	3,681	16,014
Arkansas	18.4	26.9	1,667,646	436,286	3,822	33,389	2,353	14,190
California	21.6	25.3	25,927,000	4,950,474	5,237	619,381	29,956	20,676
Colorado	26.9	27.1	2,944,127	574,213	5,127	62,378	3,302	18,891
Connecticut	18.6	31.4	3,750,000	469,123	7,994	83,842	3,290	25,484
Delaware	27.1	28.9	576,333	99,658	5,783	13,397	669	20,025
District of Columbia	20.2	30.7	576,563	80,694	7,145	13,980	601	23,261
Florida	22.0	30.8	10,613,838	1,861,592	5,701	241,713	13,045	18,529
Georiga	20.2	28.5	5,591,154	1,151,687	4,855	110,886	6,504	17,049
Hawaii	19.3	23.8	831,585	171,708	4,843	22,663	1,113	20,362
Idaho	20.6	20.4	688,603	220,840	3,118	15,423	1,011	15,255
Illinois	20.5	25.1	9,326,270	1,821,407	5,120	233,661	11,443	20,420
Indiana	18.8	27.3	4,400,000	954,581	4,609	93,805	5,554	16,890
Iowa	24.5	26.8	2,235,698	483,652	4,623	47,870	2,780	17,219
Kansas	24.7	28.3	2,248,213	437,034	5,144	45,050	2,480	18,165
Kentucky	18.4	27.1	2,588,980	636,401	4,068	55,351	3,690	15,000
Louisiana	21.2	28.0	3,196,065	784,757	4,073	61,237	4,211	14,542
Maine	22.0	33.4	1,247,041	215,149	5,796	21,146	1,220	17,333
Maryland	24.2	29.2	4,549,085	715,176	6,361	104,631	4,802	21,789
Massachusetts	31.0	28.3	5,331,644	834,314	6,390	135,861	6,020	22,568
Michigan	25.4	30.1	8,755,426	1,581,925	5,535	171,003	9,314	18,360
Minnesota	27.7	30.4	4,300,400	756,374	5,686	82,223	4,390	18,730
Mississippi	17.6	24.4	1,571,456	502,417	3,128	33,009	2,574	12,824
Missouri	21.0	27.0	3,826,200	812,234	4,711	89,572	5,127	17,471
Montana	28.2	31.5	735,000	152,974	4,805	12,205	799	15,275
Nebraska	23.5	26.5	1,277,694	274,081	4,662	27,743	1,580	17,559
Nevada	18.2	23.3	970,636	201,316	4,821	23,298	1,124	20,728
New Hampshire	14.7	26.3	945,305	172,785	5,471	23,147	1,111	20,834
New Jersey	29.1	34.1	9,253,451	1,089,646	8,492	192,893	7,735	24,938
New Mexico	25.2	30.3	1,302,943	301,881	4,316	21,677	1,520	14,261
New York	30.5	37.1	21,270,420	2,598,337	8,186	397,602	18,002	22,087
North Carolina	20.7	28.1	4,976,689	1,086,871	4,579	108,396	6,653	16,293
North Dakota	24.4	24.4	437,683	117,825	3,715	9,686	637	15,206
Ohio	22.1	29.5	9,191,200	1,771,516	5,188	190,720	10,859	17,563
Oklahoma	21.9	27.1	2,422,000	579,087	4,182	48,620	3,146	15,455
Oregon	25.9	30.2	2,513,000	484,652	5,185	49,198	2,861	17,196
Pennsylvania	26.2	34.8	10,852,863	1,667,834	6,507	222,228	11,893	18,686
Rhode Island	25.1	32.7	853,664	138,813	6,150	18,894	1,005	18,800
South Carolina	18.8	29.1	2,744,462	622,112	4,412	53,006	3,498	15,153
South Dakota	21.5	26.2	534,987	129,164	4,142	10,997	696	15,800
Tennessee	16.8	22.4	2,930,766	824,595	3,554	77,540	4,887	15,867
Texas	20.4	27.0	15,269,681	3,382,887	4,514	285,085	17,055	16,716
Utah	24.2	22.3	1,395,104	447,891	3,115	24,199	1,729	13,996
Vermont	26.1	35.4	592,671	95,762	6,189	9,889	565	17,503
Virginia	21.0	28.4	5,569,301	998,601	5,577	122,215	6,213	19,671
Washington	25.8	26.0	4,098,977	839,709	4,881	92,174	4,909	18,777
West Virginia	23.3	36.5	1,620,343	322,389	5,026	24,622	1,790	13,755
Wisconsin	25.6	32.8	4,597,174	797,621	5,764	86,147	4,906	17,560
Wyoming	25.7	35.3	566,721	98,226	5,770	7,378	452	16,323

*The figures shown are for the calender year 1990.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Early Estimates Public and Private Elementary and Secondary Education Statistics: School Year 1991-92*, tables 6 and 9 (based on the Common Core of Data) and U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various years.

Table 48-3 School revenues as a percentage of GNP, and revenue sources for public elementary and secondary schools: School years ending 1920 through 1989

School year ending	School revenues as a percentage of GNP[1]	Sources Percent of total school revenues		
		Local[2]	State	Federal
1920	[3]1.2	83.2	16.5	0.3
1930	2.0	82.7	16.9	0.4
1940	2.5	68.0	30.3	1.8
1942	1.9	67.1	31.4	1.4
1944	1.4	65.6	33.0	1.4
1946	1.4	63.9	34.7	1.4
1948	1.8	58.3	38.9	2.8
1950	2.1	57.3	39.8	2.9
1952	1.9	57.9	38.6	3.5
1954	2.1	58.1	37.4	4.5
1956	2.4	55.9	39.5	4.6
1958	2.7	56.6	39.4	4.0
1960	3.0	56.5	39.1	4.4
1962	3.3	56.9	38.7	4.3
1964	3.4	56.3	39.3	4.4
1966	3.6	53.0	39.1	7.9
1968	3.9	52.7	38.5	8.8
1970	4.2	52.1	39.9	8.0
1971	4.4	52.5	39.1	8.4
1972	4.5	52.8	38.3	8.9
1973	4.3	51.3	40.0	8.7
1974	4.3	50.1	41.4	8.5
1975	4.4	48.8	42.2	9.0
1976	4.5	46.5	44.6	8.9
1977	4.2	47.8	43.4	8.8
1978	4.1	47.6	43.0	9.4
1979	3.9	44.6	45.6	9.8
1980	3.9	43.4	46.8	9.8
1981	3.9	43.4	47.4	9.2
1982	3.6	45.0	47.6	7.4
1983	3.7	45.0	47.9	7.1
1984	3.7	45.4	47.8	6.8
1985	3.6	44.4	48.9	6.6
1986	3.7	43.9	49.4	6.7
1987	3.7	43.9	49.7	6.4
1988	3.8	44.1	49.5	6.3
1989	3.9	46.1	47.7	6.2

[1] GNP is for the calender year in which the school-year began. Previous version used fiscal year GNP.

[2] Includes intermediate sources and a relatively small amount from nongovernmental sources (gifts and tuition and transportation fees from patrons). Nongovernmental sources accounted for 0.4 percentage of total revenues in school-year 1967-68.

[3] 1919 GNP from U.S. Department of Commerce, Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970*, series F 1-5.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, tables 35 and 151 (based on Common Core of Data).

Table 48-4 Total and current expenditures per pupil in public elementary and secondary schools: School years ending 1920 through 1991

School year ending	Expenditures per pupil in average daily attendance[1]		Expenditures per pupil in fall enrollment[1,2]	
	Total[3]	Current[3]	Total[3]	Current[3]
1920	$449	$375	$336	$280
1930	849	678	703	562
1932	900	753	762	638
1934	771	682	655	580
1936	857	724	725	612
1938	932	784	800	673
1940	1,013	844	878	732
1942	945	844	809	723
1944	958	899	807	758
1946	1,071	1,001	912	853
1948	1,177	1,043	1,028	911
1950	1,472	1,189	1,306	1,055
1952	1,602	1,254	1,403	1,098
1954	1,748	1,319	1,554	1,173
1956	1,928	1,466	1,762	1,340
1958	2,098	1,600	1,914	1,459
1960	2,147	1,710	2,005	1,597
1962	2,304	1,867	2,162	1,752
1964	2,426	1,999	2,258	1,860
1966	2,744	2,257	2,548	2,095
1968	3,097	2,592	2,881	2,411
1970	3,386	2,893	3,112	2,659
1971	3,538	3,071	3,270	2,839
1972	3,670	3,221	3,366	2,953
1973	3,787	3,369	3,492	3,106
1974	3,917	3,467	3,573	3,163
1975	3,994	3,528	3,681	3,252
1976	4,099	3,631	3,776	3,345
1977	4,144	3,736	3,818	3,443
1978	4,281	3,897	3,938	3,585
1979	4,320	3,950	3,968	3,627
1980	4,296	3,919	3,950	3,603
1981	4,269	3,867	3,927	3,558
1982	4,265	3,879	3,946	3,588
1983	4,410	4,032	4,075	3,725
1984	4,613	4,175	4,263	3,858
1985	4,765	4,394	4,414	4,071
1986	5,007	4,622	4,629	4,273
1987	5,255	4,780	4,873	4,433
1988	5,380	4,902	4,983	4,539
1989	5,626	5,126	5,219	4,755
1990	[4]5,717	[4]5,209	[4]5,292	[4]4,821
1991	[4]5,748	[4]5,237	[4]5,320	[4]4,847

[1] In constant 1990-91 dollars, based on the Consumer Price Index, prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis.

[2] Data for 1919-20 to 1953-54 are based on school-year enrollment.

[3] Total Expenditure=Current Expenditure + Capital Outlays + Interest on Debt.

[4] Estimated.

NOTE: Beginning in 1980-81, two changes in definitions were made. State administration expenditures are excluded from both "total" and "current" expenditures, and "other programs" such as summer schools and community services are included in both "total" and "current" expenditures. Beginning in 1988-89, extensive changes were made in the data collection procedures. From school-year 1980-81 through 1990-91, capita outlays and interest on debt are estimated. Some data have been revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, table 158 (from Common Core of Data).

Note on calculation of national index of public school revenues

Total per pupil education revenues are the ratio of public elementary and secondary school education revenues from all sources to public elementary and secondary school enrollment. Per capita income is the ratio of total personal income to total population. The index can be expressed algebraically, therefore, as a function of 4 variables:

$$\text{National Index} = \frac{\left(\dfrac{\text{Total education revenues}}{\text{Public school enrollment}}\right)}{\left(\dfrac{\text{Total personal income}}{\text{Total population}}\right)} \times 100$$

or

$$\text{National index} = \frac{\text{Total per pupil education revenues}}{\text{Per capita income}} \times 100$$

Total education revenues are in 1990-91 dollars, based on the Consumer Price Index (CPI), prepared by the Bureau of Labor Statistics, U.S. Department of Labor, adjusted to a school-year basis. Personal income is in constant 1990 dollars. Total personal income and total population are for the calendar year in which the school year began.

Table 49-1 Current public expenditures for education, by country: School year 1986-87 (in constant 1988-89 U.S. dollars)

			Current Public Expenditures							
			Total				Per student			
	Enrollment[1]		Millions[2]		as a percent of GDP		Constant 1988–89 U.S. dollars[2]		as a fraction of GDP/capita	
	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education	Pre-K–12th	Higher Education
Larger countries										
United States	**45,320,339**	**9,064,168**	**164,164**	**50,870**	**3.6**	**1.1**	**3,622**	**5,612**	**19.2**	**29.8**
Japan[3]	23,936,179	2,409,687	49,656	17,131	3.0	1.0	2,074	7,109	15.4	52.8
West Germany	10,751,022	1,579,085	22,730	7,156	2.7	0.8	2,114	4,532	15.3	32.8
United Kingdom	9,685,000	1,068,386	25,510	6,717	3.5	0.9	2,634	6,287	20.7	49.5
France	12,048,104	1,289,942	27,359	4,872	3.7	0.7	2,271	3,777	17.0	28.3
Canada	4,937,991	1,245,471	18,485	8,628	4.1	1.9	3,743	6,928	21.3	39.4
Italy	10,512,792	1,153,224	20,803	3,327	2.9	0.5	1,979	2,885	15.8	23.1
Spain[4]	9,182,430	976,558	7,521	1,289	2.2	0.4	819	1,320	9.4	15.1
Turkey	9,896,324	505,091	2,536	983	1.2	0.5	256	1,945	6.1	46.3
Smaller countries										
Australia	2,978,115	390,706	6,600	3,188	3.0	1.4	2,216	8,160	15.9	58.7
Austria	1,181,010	179,909	3,456	947	3.8	1.0	2,927	5,265	24.2	43.6
Belgium	1,920,531	252,236	4,752	1,147	3.9	1.0	2,474	4,546	20.3	37.4
Denmark	936,802	118,641	3,123	1,026	4.3	1.4	3,334	8,650	23.5	61.0
Finland	890,945	133,933	2,529	642	4.0	1.0	2,838	4,791	21.7	36.7
Ireland	906,400	73,450	1,187	268	4.4	1.0	1,310	3,643	16.9	46.9
Luxembourg[5]	53,854	843	171	5	3.0	0.1	3,182	6,108	22.6	43.4
Netherlands	3,240,785	399,786	6,441	2,938	3.4	1.6	1,988	7,350	15.5	57.2
New Zealand	730,778	102,684	1,135	464	3.0	1.2	1,553	4,521	13.7	39.7
Norway	808,750	104,246	2,914	584	4.3	0.9	3,604	5,599	22.4	34.9
Portugal	2,030,538	129,277	1,791	307	2.9	0.5	882	2,373	13.8	37.2
Sweden	1,484,367	183,645	5,326	1,030	4.4	0.8	3,588	5,609	24.8	38.8
Switzerland	902,602	117,017	3,780	926	3.5	0.9	4,188	7,916	25.5	48.3

[1] For the United States, enrollment in nursery school, kindergarten, and higher education is full-time equivalent. For other countries,enrollment includes enrollment in education preceding the first level, first level, second level, and third level. See supplemental note *Indicator 49* for a definition of these levels.

[2] Expenditures for 1986-1987 are in constant school-year 1988-1989 U.S. dollars, converted using the CPI adjusted to a school-year basis, so that 1986-1987 expenditures can be compared to 1988-1989 for the larger countries. Expenditures for 1986-1987 are used in this table because it is the last year reported for many of the countries above. Purchasing power parity indices were used to convert other currencies to U.S. dollars.

[3] Expenditures include both current public and private expenditures. See supplemental note *Indicator 49* for further discussion.

[4] Percentage distribution of expenditure for 1979; total current expenditures and enrollment for 1986.

[5] Data for 1987.

NOTE: Current public expenditures for 2nd level may include expenditures for vocational, teacher training and general education for countries other than the United States (see supplemental note to *Indicator 49*).

SOURCE: UNESCO *Statistical Yearbook*, 1990, 1989, tables 3.4, 3.7, 4.3; 1988-table 1.1., OECD *National Accounts, Main Aggregates. Volume I, 1960-1988;* GDP taken from part two; Population from part eight, table 1; PPPI from part eight, table 3.

Note on international comparisons of current public education expenditures

The purpose of this indicator is to compare *public* support for education across the "larger" countries, based on GDP, population, and school enrollment, for which the data are available.

Definitions

Public education expenditures include funds channeled to both public and private schools by federal, state, and local governments either directly or through students. This includes expenditures at public schools funded by public sources and subsides to students at private schools from government agencies. *Private education expenditures* are expenditures financed by private sources—households, private nonprofit institutions, businesses, and corporations. For example, this includes expenditures supported by public and private school tuition and fees and expenses for books and materials that must be purchased by students themselves. UNESCO's *Statistical Yearbook*, the source for the expenditure data, reports public expenditures only. Japan is an exception which is discussed below.

Current expenditures relate to educational goods and services whose life span should not in theory exceed the current year (salaries of personnel, school books and other teaching materials, scholarships, minor repairs and maintenance to school buildings, administration, etc.). Current expenditures exclude both capital expenditures (construction of buildings, major repairs, major items of equipment, vehicles) and the servicing of debt.

This indicator focuses on the portion of current education expenditures at both public and private schools funded by public sources.

Expenditures in the United States

Elementary and Secondary

For the United States, current public expenditures for *elementary and secondary education* include current expenditures in local public school districts funded by state and local taxes, federal programs administered by the U.S. Department of Education (ED), and programs operated outside of ED that are not administered by state or local education agencies (e.g., Head Start, Department of Defense Schools, and schools operated by the Bureau of Indian Affairs). Also included are expenditures to operate ED and other activities such as research, statistics, assessment, and school improvement.

Not available for inclusion were state expenditures to operate state departments of education and other direct state expenditures, including state schools for the deaf and blind and programs in correctional institutions. This exclusion produces an undercount of public expenditures that could reach $5 billion. Other countries may include these expenditures as "other" or "not distributed", as described below, so the undercount may not be a problem for the United States alone.

Higher Education

Current public expenditures for higher education in the United States includes expenditures at both public and private colleges and universities funded by federal, state and local governments. The Integrated Postsecondary Education Data System (IPEDS), the core postsecondary education data collection program for NCES, gathers institutional reports of revenue received by both public and private institutions from both public and private sources. Current expenditures are separated into public and private expenditures based on the share of federal, state, and local revenues reported by public and private nonprofit institutions.

In order to account for federal aid that goes directly to students for educational expenses, 60 percent of federally administered Pell Grants were added, to supplement funds directed to institutions with an estimate of the portion of federal direct student support used for on-campus expenses.

Public expenditures for less-than-2-year public and private institutions were not included in *current public expenditures for higher education* in the United States. In addition, the students enrolled in programs in these institutions are also excluded from higher education enrollments. If this sector of postsecondary education were included with higher education, *public expenditures per student* would be lower (higher) assuming public expenditures in less-than-2-year institutions is less (greater) than in other higher education institutions.

Private Expenditures

Per pupil expenditures are calculated as current public expenditures divided by enrollment in both public and private schools. This is a measure of average public investment per student in the education system. It is not a measure of total resources a student receives which would include private expenditures. For France, Japan, and the United States, private education expenditures are a significant portion of GDP.

Total Expenditures on Education in 1987–1988

Country	Percentage of GDP Public sources	 Private sources	 Total
United States	4.77	1.68	6.44
Japan	4.98	1.41	6.39
West Germany	4.24	.17	[illegible]
United Kingdom	4.97	N/A	N/A
France	5.57	1.03	[illegible]
Canada	6.53	.59	7.12
Italy	4.96	N/A	N/A
Turkey	1.59	N/A	N/A

NOTE: *Total expenditures* include current expenditures, capital expenditures, and interest on debt.

SOURCE: Organization for Economic Co-Operation and Development, *Education in OECD Countries 1987–88*, table 6.1.

How Students Are Classified

The International Standard Classification of Education (ISCED) was designed as an instrument for presenting statistics of education internationally. Many countries report education statistics to UNESCO and the Organization for Economic Cooperation and Development (OECD) using the ISCED. In this classification system, education is divided into several levels. The following are summary definitions used in this indicator:

> *Education preceding the first level,* where it is provided, usually begins at age 3, 4, or 5 (sometimes earlier) and lasts from 1 to 3 years. For the United States, this would primarily be nursery schools and kindergarten classes.
>
> *Education at the first level* usually begins at age 5, 6, or 7, and lasts for about 5 or 6 years. For the United States this would start with first grade and finish with grade 6.
>
> *Education at the second level, first stage,* begins at about age 11 or 12 and lasts for about 3 years. *Education at the second level, second stage,* begins at about age 14 or 15 and lasts for about 3 years. For the United States second level would start with grade 7 and finish with grade 12.
>
> *Education at the third level* is provided at universities, colleges, and professional schools, and typically requires as a minimum condition of admission the successful completion of education at the second level (or equivalent knowledge). For the United States, third level includes junior colleges and degree granting technical institutes in addition to 4-year colleges and universities.

For the United States, *pre-kindergarten to 12th-grade enrollments* include full time equivalent enrollment in both public and private nursery schools and kindergartens and total public and private enrollments in grades 1–12. For other countries, *pre-kindergarten to 12th-grade enrollments* are ISCED levels 0–2 reported by UNESCO.

How Expenditures Are Compared Across Countries

To compare public expenditures per student in the United States with expenditures per student in other countries, expenditures must be denominated in a common currency. Conversion of other countries' expenditures to U.S. dollars facilitates comparison with expenditures in the United States. There are, at least, two methods of conversion: market exchange rates and purchasing power parity (PPP) indices.

The market exchange rate is the rate at which an individual can exchange the currencies of two countries. It is determined by confidence in the government, the monetary system, and the economies of the two countries and by the relative demands for commodities the two countries trade with each other. Market exchange rates can be highly volatile.

PPP indices are calculated by comparing the cost of a fixed market basket of goods in each country. Changes over time in the PPP index are determined by the rates of inflation in each country. The PPP index is not volatile.[1]

PPP indices for Gross Domestic Product (GDP) have been used in this indicator.[2]

Expenditure Exclusions for Other Countries

The source for expenditures and enrollment data for countries other than the United States is the UNESCO *Statistical Yearbook, 1991, 1990, and 1989* editions. It reports public current expenditures for all levels of education and then allocates these expenditures to each level. This indicator includes public expenditures for the pre-first, first, second and third levels; excluded are expenditures for "other" and "not distributed."

In some countries the "other" and "not distributed" categories are quite large, ranging from a low of 8 percent for the total of the two categories in the United Kingdom to a high of 25 percent in Italy. It is likely that some portion of these expenditures should be included, if it were possible to distribute them across elementary and secondary education and postsecondary education.

Distribution of current expenditures for education, by level of education and country: School year beginning 1986

Country	Level of education		
	Pre-first first, and second	Third	Other and not distributed
United States	75.8	24.2	0.0
Japan[1]	62.9	21.7	15.4
West Germany	66.7	21.0	12.3
United Kingdom	73.3	19.3	7.5
France	70.2	12.5	17.3
Canada	61.7	28.8	9.6
Italy	64.4	10.3	25.3
Spain[2]	81.7	14.0	4.3
Turkey	65.3	25.3	9.4

[1] Includes both public and private expenditures.
[2] Data for 1979.
SOURCE: UNESCO *Statistical Yearbook*, 1990 and 1989 editions, table 4.3.

Special Note on Japan

Data for Japan reported in UNESCO's *Statistical Yearbook* includes current education expenditures from both public and private sources. Based on figures reported in Japan's *Statistical Abstract of Education, Science, and Culture* (1990 and 1988 editions) an estimated 12 percent of Japan's education expenditures for grades kindergarten through 12 is by private schools and institutions. Based on a comparison of these two sources, it appears that a part of the expenditures reported in UNESCO's *Statistical Yearbook* but not distributed by level includes special education and colleges of technology. Thus, there are sources of both over- and understatement of Japan's *public* education spending at the pre-first through third levels.

NOTES:

[1] For a further argument against using market exchange rates see Rasel, Edith M. and Lawrence Mishel, *Shortchanging Education*, Economic Policy Institute, January 1990.

[2] PPP indices for other aggregates such as private consumption expenditures are available. See Barro, Stephen M., *International Comparisons of Education Spending: Some Conceptual and Methodological Issues*, SMB Economic Research, Inc., April 1990, for a discussion of the strengths and weaknesses of using various indices.

Table 50-1 Percentage distribution of sources of general education revenue of institution of higher education, by type and control of institution and revenue source: Fiscal year 1989

(Percent from each source)

Revenue source	Type of institution		
	All	4-year	2-year
		All institutions	
Total	100.0	100.0	100.0
Tuition & fees	32.0	33.3	24.4
Government appropriations	39.2	35.0	63.8
Federal	1.7	1.9	0.6
State & local	37.4	33.1	63.2
Government grants & contracts	15.1	15.9	9.9
Federal	11.6	12.8	4.1
State & local	3.5	3.1	5.7
Private gifts, grants, contracts	7.3	8.4	1.2
Endowment income	3.0	3.5	0.2
Sales & services of educational activities	3.4	3.9	0.5
		Public institutions	
Total	100.0	100.0	100.0
Tuition & fees	19.4	19.5	19.0
Government appropriations	58.0	55.1	69.4
Federal	2.3	2.7	0.7
State & local	55.7	52.5	68.8
Government grants & contracts	13.9	14.9	10.2
Federal	10.5	12.1	4.2
State & local	3.4	2.8	6.0
Private gifts, grants, contracts	4.6	5.6	0.8
Endowment income	0.7	0.8	0.1
Sales & services of educational activities	3.4	4.1	0.5
		Private institutions	
Total	100.0	100.0	100.0
Tuition & fees	56.9	55.9	84.3
Government appropriations	1.9	1.9	0.7
Federal	0.7	0.7	0.1
State & local	1.1	1.1	0.7
Government grants & contracts	17.3	17.7	6.6
Federal	13.7	14.1	3.5
State & local	3.6	3.6	3.1
Private gifts, grants, contracts	12.7	13.0	6.4
Endowment income	7.7	8.0	1.3
Sales & services of educational activities	3.5	3.6	0.7

NOTE: General education revenue as used in this indicator excludes four categories of revenue received by many institutions: 1) sales and services of auxiliary enterprises, 2) sales and services of hospitals, 3) independent operations (federally funded research and development center), and 4) other sources. In addition, the amount of funds reported for Pell Grants has been included under tuition and auxiliary enterprises.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1989 IPEDS Survey of Financial Statistics of Institutions of Higher Education.

Table 50-2 General education revenue for institutions of higher education, by control of institutions and revenue source: Selected fiscal years, 1976–1989

(Billions of 1991 dollars)

Revenue source	1976	1978	1980	1982	1984	1985	1986	1987	1988	1989
					All institutions					
Total	$75.3	$79.2	$78.6	$78.9	$85.1	$90.0	$95.1	$100.2	$103.4	$108.1
Tuition & fees	20.0	21.4	20.9	22.8	26.3	27.4	28.9	31.4	32.7	34.6
Government appropriations	34.5	36.4	35.3	34.5	35.9	38.5	40.2	40.7	41.6	42.3
Federal	2.2	2.3	2.1	1.9	1.9	2.0	2.0	2.0	2.0	1.9
State & local	32.3	34.1	33.2	32.6	34.0	36.4	38.2	38.7	39.6	40.4
Government grants & contracts	12.8	12.7	13.3	11.9	11.7	12.4	13.4	14.7	15.2	16.3
Federal	11.1	11.0	11.5	10.1	9.8	10.3	11.1	11.7	12.0	12.5
State & local	1.8	1.7	1.8	1.8	1.9	2.1	2.4	3.0	3.2	3.8
Private gifts, grants, contracts	4.7	5.0	4.9	5.1	5.9	6.3	6.8	7.3	7.5	7.9
Endowment income	1.7	1.8	2.1	2.3	2.5	2.7	2.8	2.9	3.0	3.3
Sales & services of educational activities	1.6	1.9	2.2	2.3	2.6	2.7	3.0	3.2	3.4	3.7
					Public institutions					
Total	$53.2	$55.8	$54.8	$54.1	$57.6	$61.2	$64.7	$66.7	$68.9	$71.9
Tuition & fees	8.5	9.0	8.5	9.2	10.9	11.1	11.8	12.5	13.1	14.0
Government appropriations	33.8	35.6	34.6	33.8	35.2	37.8	39.5	40.0	40.9	41.7
Federal	1.9	1.9	1.8	1.6	1.6	1.7	1.8	1.8	1.7	1.6
State & local	31.8	33.7	32.8	32.2	33.6	36.1	37.8	38.2	39.2	40.0
Government grants & contracts	8.1	8.0	8.2	7.3	7.2	7.7	8.3	8.9	9.2	10.0
Federal	6.9	6.7	7.0	6.1	5.9	6.2	6.6	6.8	7.1	7.6
State & local	1.2	1.2	1.2	1.2	1.3	1.4	1.7	2.1	2.1	2.4
Private gifts, grants, contracts	1.5	1.7	1.7	1.8	2.2	2.4	2.6	2.8	3.0	3.3
Endowment income	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.5
Sales & services of educational activities	1.0	1.2	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5
					Private institutions					
Total	$21.2	$22.4	$22.8	$23.7	$27.6	$27.5	$29.0	$32.0	$33.0	$34.6
Tuition & fees	11.0	11.8	11.8	12.9	14.8	15.5	16.3	18.1	18.7	19.7
Government appropriations	0.7	0.7	0.7	0.7	0.6	0.7	0.7	0.7	0.7	0.6
Federal	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
State & local	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Government grants & contracts	4.5	4.5	4.8	4.4	4.3	4.6	4.9	5.6	5.7	6.0
Federal	3.9	4.1	4.3	3.9	3.8	3.9	4.2	4.7	4.6	4.7
State & local	0.6	0.5	0.6	0.5	0.6	0.6	0.7	0.9	1.1	1.3
Private gifts, grants, contracts	3.0	3.2	3.1	3.2	4.9	3.7	3.9	4.3	4.3	4.4
Endowment income	1.4	1.5	1.6	1.9	2.0	2.2	2.2	2.4	2.5	2.7
Sales & services of educational activities	0.5	0.7	0.7	0.7	0.9	0.9	0.9	1.0	1.1	1.2

NOTE: The average consumer price index for the school year was used to convert revenue figures to constant dollars. See note to table 50-1 for information on the sources of revenue excluded from the totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, Tables 302, 303, and 304 (based on IPEDS/HEGIS Financial Statistics Survey).

Table 51-1 Index of expenditures (in constant dollars) per full-time-equivalent student at *public* institutions of higher education, by type of institution: Academic years ending 1977–1989

(1981=100)

Academic year ending	Total	Instruction	Administration[1]	Student services	Research	Libraries	Public service	Operation and maintenance of plant	Scholarships and fellowships	Mandatory transfers
					Universities					
1977	98	100	99	96	92	107	96	99	112	121
1978	99	101	102	100	94	103	94	100	108	103
1979	103	104	105	101	99	102	101	105	102	105
1980	102	102	99	102	101	116	99	102	101	101
1981	100	100	100	100	100	100	100	100	100	100
1982	98	99	100	98	96	98	96	101	97	85
1983	98	99	100	98	96	99	95	101	97	84
1984	100	101	103	100	98	104	97	104	103	100
1985	105	105	112	103	104	105	102	107	107	94
1986	110	107	119	107	110	110	106	107	117	129
1987	112	110	122	110	113	106	105	102	122	136
1988	115	111	124	113	120	113	107	102	129	158
1989	116	111	125	115	124	112	112	101	138	155
					4-year colleges					
1977	96	100	93	90	85	97	89	93	119	103
1978	97	100	94	95	87	96	90	95	108	111
1979	100	102	100	101	95	97	93	98	103	108
1980	101	101	102	103	102	99	100	99	105	99
1981	100	100	100	100	100	100	100	100	100	100
1982	99	101	101	94	95	95	98	101	89	85
1983	97	99	98	93	92	91	96	99	91	87
1984	98	99	104	100	93	95	98	93	89	92
1985	103	103	111	105	101	97	110	101	88	89
1986	107	108	115	109	110	99	113	96	98	103
1987	107	107	116	107	116	89	123	93	105	93
1988	109	108	117	110	122	94	131	93	107	95
1989	107	106	113	106	126	91	131	88	104	95
					2-year colleges					
1977	102	103	97	99	(2)	114	95	96	133	148
1978	103	103	105	97	(2)	115	101	98	101	148
1979	106	105	109	102	(2)	114	(2)	101	105	166
1980	104	104	104	103	(2)	106	108	102	108	134
1981	100	100	100	100	(2)	100	100	100	100	100
1982	99	100	99	101	(2)	107	(2)	102	91	86
1983	94	95	97	97	(2)	90	(2)	97	88	88
1984	96	96	99	96	(2)	91	(2)	98	86	83
1985	105	104	111	106	(2)	97	(2)	106	101	86
1986	108	107	118	112	(2)	99	99	108	106	87
1987	110	108	126	119	(2)	79	(2)	106	109	54
1988	108	105	121	123	(2)	93	(2)	103	115	49
1989	109	107	123	118	(2)	90	110	102	114	47

[1] Includes institutional and academic support, less libraries.

[2] Not calculated; expenditure category constituted 2 percent or less of total expenditures.

NOTE: The Higher Education Price Index was used to convert expenditure figures to constant dollars.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, tables 316, 317, 318; 1989 IPEDS Financial Statistics and Fall Enrollment surveys.

Table 51-2 Index of expenditures (in constant dollars) per full-time-equivalent student at *private, nonprofit* institutions of higher education, by type of institution: Academic years ending 1977–1989

(1981=100)

Academic year ending	Total	Instruction	Administration[1]	Student services	Research	Libraries	Public service	Operation and maintenance of plant	Scholarships and fellowships	Mandatory transfers
					Universities					
1977	98	97	93	93	104	110	106	94	96	68
1978	97	96	93	92	101	110	99	93	98	71
1979	97	96	98	95	102	103	99	96	96	84
1980	99	98	101	95	102	99	110	96	95	82
1981	100	100	100	100	100	100	100	100	100	100
1982	99	102	98	103	95	100	97	103	99	76
1983	100	103	106	106	90	98	100	101	99	77
1984	108	109	118	113	96	111	103	107	115	83
1985	112	112	120	120	103	107	131	110	122	100
1986	117	116	126	128	109	110	134	110	129	100
1987	127	128	139	140	118	105	157	108	145	115
1988	129	127	140	140	122	122	153	109	150	124
1989	131	130	142	139	122	120	158	108	155	134
					4-year colleges					
1977	97	101	94	91	97	106	101	94	96	99
1978	97	101	95	93	93	106	92	95	94	97
1979	98	101	96	95	101	104	93	95	93	99
1980	100	101	98	98	104	102	93	99	97	103
1981	100	100	100	100	100	100	100	100	100	100
1982	101	101	102	102	92	100	110	100	101	98
1983	103	104	106	107	91	104	107	100	103	99
1984	107	106	109	110	93	106	111	101	112	104
1985	111	109	114	116	100	108	117	101	122	109
1986	115	112	118	120	110	111	127	102	132	113
1987	121	116	131	127	117	97	142	103	146	118
1988	124	117	130	131	124	109	159	102	158	110
1989	125	117	131	133	123	108	158	102	161	118
					2-year colleges					
1977	103	106	99	96	(2)	121	(2)	108	92	87
1978	97	99	96	96	(2)	117	(2)	101	86	73
1979	101	104	98	105	(2)	113	(2)	99	93	84
1980	100	102	100	101	(2)	110	(2)	97	99	83
1981	100	100	100	100	(2)	100	(2)	100	100	100
1982	96	98	101	99	(2)	95	(2)	93	87	80
1983	100	101	101	100	(2)	95	(2)	99	100	96
1984	100	98	103	103	(2)	94	(2)	101	107	75
1985	110	107	111	124	(2)	104	(2)	109	119	71
1986	111	110	113	128	(2)	103	(2)	108	120	62
1987	137	125	163	146	(2)	107	(2)	138	138	67
1988	138	135	148	147	(2)	100	(2)	129	168	53
1989	119	116	126	127	(2)	82	(2)	111	150	57

[1] Includes institutional and academic support, less libraries.

[2] Not calculated; expenditure category constituted 2 percent or less of total expenditures.

NOTE: The Higher Education Price Index was used to convert expenditure figures to constant dollars.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, tables 319, 320, 321; 1989 IPEDS Financial Statistics and Fall Enrollment surveys.

Table 51-3 Index of average undergraduate tuition charges (in constant dollars) at institutions of higher education, by type and control of institution: Academic years ending 1977–1990

(1981=100)

Academic year ending	Public institutions			Private institutions		
	University	Other 4-year	2-year	University	Other 4-year	2-year
1977	105	109	101	100	97	92
1978	105	108	103	99	97	93
1979	103	105	102	99	100	92
1980	102	102	101	99	99	95
1981	100	100	100	100	100	100
1982	104	102	101	104	103	98
1983	109	111	103	112	109	107
1984	114	118	110	118	113	104
1985	116	119	114	123	116	111
1986	123	118	121	127	122	112
1987	128	122	119	134	129	108
1988	128	133	123	140	132	117
1989	130	135	120	142	136	128
1990	134	139	119	149	141	135

NOTE: Tuition charges (tuition and fees) are in constant dollars, adjusted by the Consumer Price Index for the academic year (July 1–June 30). They are for the entire academic year and are average charges paid by students. They were calculated on the basis of full-time-equivalent undergraduates. Tuition at public institutions is the charge to in-state students. The amount at private institutions includes charges at both nonprofit and proprietary schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, tables 36 and 291 (based on IPEDS Institutional Characteristics and Fall Enrollment Surveys).

Table 52-1 Percentage of full-time students receiving financial aid, by source of aid, degree level, and type and control of institution: Fall 1986 and 1989

	Any aid		Federal		State		Institutional		Other	
	1986	1989	1986	1989	1986	1989	1986	1989	1986	1989
Undergraduate students										
Total	60.4	56.4	46.6	41.9	20.6	21.1	22.8	23.6	7.7	9.9
Public	53.1	48.3	39.9	34.8	18.3	19.1	15.9	15.9	6.9	9.0
4-year	54.7	49.9	41.5	36.0	19.1	19.7	17.1	17.3	7.3	9.3
2-year	48.7	44.5	35.7	32.2	16.6	18.4	13.8	13.5	6.0	8.1
Less-than-2-year	68.0	56.3	54.3	37.5	17.9	10.2	10.9	10.2	4.6	12.1
Private, nonprofit	74.2	70.4	55.5	49.4	30.7	30.6	49.4	49.7	11.3	14.7
4-year	74.2	70.5	55.3	49.1	30.6	31.0	50.6	51.3	11.6	14.7
2-year	75.3	66.9	57.6	49.4	32.2	26.9	35.8	32.6	8.2	16.5
Less-than-2-year	70.0	79.3	62.3	69.2	26.9	21.0	5.9	17.6	7.5	7.1
Private, for-profit	86.4	87.0	82.0	82.1	11.4	12.2	5.3	18.2	4.0	5.0
2-year and above	85.9	87.2	82.2	81.7	19.1	19.3	5.3	15.2	3.6	7.2
Less-than-2-year	86.6	86.9	81.9	82.4	6.6	6.4	5.3	20.7	4.2	3.3
Postbaccalaureate students										
Total	73.9	66.9	44.4	36.8	9.6	6.2	48.5	43.0	10.9	13.5
Master's	68.0	60.7	31.5	27.9	5.9	4.9	47.8	40.1	11.4	12.3
Public	67.6	58.9	30.1	24.9	6.1	6.1	48.6	41.9	8.7	9.3
Private	68.5	63.5	33.6	32.7	5.6	2.8	46.5	37.1	15.5	17.2
Doctoral	86.9	77.6	26.9	18.8	5.5	6.1	73.3	69.6	11.7	17.2
Public	89.3	76.1	28.6	16.7	7.1	7.9	75.1	68.5	11.4	19.4
Private	83.6	80.0	24.5	22.4	3.2	3.2	70.6	71.4	12.0	13.7
First-professional	75.2	73.4	65.1	62.5	15.2	8.8	39.3	34.9	10.0	14.6
Public	74.8	72.9	65.0	62.8	14.1	11.8	32.4	35.2	10.2	11.1
Private	75.4	73.8	65.2	62.3	15.7	6.7	42.9	34.7	9.9	17.0

NOTE: At the postbaccalaureate level, private institutions include nonprofit and for-profit institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS), 1987 and 1990.

Table 52-2 Standard errors for estimated percentages in table 52-1

	Any aid		Federal		State		Institutional		Other	
	1986	1989	1986	1989	1986	1989	1986	1989	1986	1989
Undergraduate students										
Total	0.7	0.8	0.7	0.8	0.6	0.8	0.8	0.7	0.3	0.4
Public	0.7	1.0	0.7	0.9	0.7	1.0	0.6	0.7	0.3	0.4
4-year	0.8	1.1	0.8	1.0	0.9	1.2	0.6	0.7	0.3	0.5
2-year	1.6	2.1	1.3	2.0	1.1	1.9	1.3	1.4	0.8	0.7
Less-than-2-year	6.8	5.2	9.2	6.4	7.8	2.2	4.2	2.6	1.2	5.4
Private, nonprofit	0.9	1.2	1.2	1.2	1.3	1.5	1.4	1.4	0.7	0.7
4-year	1.0	1.3	1.3	1.3	1.4	1.6	1.4	1.4	0.7	0.7
2-year	3.6	3.3	4.2	3.1	3.4	4.0	4.2	4.0	1.7	2.8
Less-than-2-year	12.7	3.7	11.7	4.7	10.3	8.8	1.6	8.8	3.6	2.9
Private, for-profit	1.4	1.2	1.8	1.4	1.7	1.5	0.8	1.7	1.1	0.6
2-year and above	2.3	1.7	2.6	1.9	3.4	2.9	1.1	2.5	0.8	0.9
Less-than-2-year	1.8	1.7	2.2	2.0	1.9	1.3	1.1	2.1	1.8	0.6
Postbaccalaureate students										
Total	1.0	1.1	3.0	1.3	1.5	0.6	1.3	1.3	0.6	0.7
Master's	1.7	1.8	1.3	1.4	0.6	0.7	2.1	2.0	1.0	1.1
Public	2.4	2.3	1.8	1.5	1.0	1.1	2.6	2.5	1.4	1.0
Private	1.5	2.6	1.8	2.6	0.6	0.6	2.5	3.1	1.3	2.1
Doctoral	1.6	2.5	2.6	1.8	1.2	1.7	1.9	2.7	1.7	1.9
Public	2.2	3.3	4.0	2.2	2.1	2.5	2.6	3.4	2.1	2.6
Private	2.2	3.5	3.1	3.1	1.0	1.5	3.0	4.3	2.2	2.6
First-professional	1.4	1.2	2.5	1.5	2.4	1.2	3.0	1.5	0.8	1.2
Public	2.6	1.4	2.3	1.6	3.1	2.0	2.0	2.2	1.1	1.3
Private	1.5	1.8	3.3	2.3	3.2	1.3	3.4	2.0	1.0	1.9

NOTE: At the postbaccalaureate level, private institutions include nonprofit and for-profit institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Postsecondary Student Aid Study (NPSAS), 1987 and 1990.

Table 53-1 Students per full-time-equivalent staff member: 1950–1990

Year	Total staff	Classroom teachers [1]	Principals and assistant principals	Other instructional staff[2]	School district administrators[3]	Support staff[4]
1950	19	27	582	3,985	746	83
1960	17	26	554	871	829	60
1970	14	23	504	255	699	45
1981	10	19	382	72	519	33
1985	10	18	315	98	601	30
1986	9	18	305	94	585	30
1987	9	18	302	89	533	30
1988	9	18	318	88	539	29
1989	9	17	317	84	580	30
1990	9	17	316	81	569	30

[1] Includes a small number of teacher aides.

[2] Includes teacher aides, librarians, guidance counselors, psychological personnel, and other instructional staff.

[3] Includes intermediate district staff, school district superintendents, assistants to superintendents and supervisors.

[4] Includes secretarial and clerical personnel, transportation staff, food service, plant operation and maintenance, health, and recreational and other staff.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Statistics of State School Systems*, various years; and *Digest of Education Statistics, 1991*.

Table 54-1 Percentage distribution of FTE staff in higher education institutions, by type and control of institution and occupation: Fall, selected years 1977–1989

Occupation	Total	4-year	2-year	Public	Private
1977					
Total	100.0	100.0	100.0	100.0	100.0
Professional	53.0	51.0	63.8	53.4	52.1
Faculty (instruction and research)	33.9	30.7	51.4	35.5	30.5
Administrative	6.7	6.6	7.4	5.8	8.8
Support professional	12.4	13.7	5.1	12.2	12.8
Nonprofessional	47.0	49.0	36.2	46.6	47.9
Secretarial and clerical	21.7	22.3	18.4	21.3	22.5
Technical and paraprofessional	7.8	8.2	5.2	7.8	7.6
Skilled craft	3.4	3.6	1.9	3.5	3.1
Service/maintenance	14.2	14.9	10.6	14.0	14.7
1981					
Total	100.0	100.0	100.0	100.0	100.0
Professional	54.2	52.3	64.8	54.4	53.9
Faculty (instruction and research)	33.1	29.7	51.3	34.3	30.3
Administrative	6.9	6.8	7.6	5.9	9.2
Support professional	14.2	15.8	6.0	14.2	14.4
Nonprofessional	45.8	47.7	35.2	45.6	46.1
Secretarial and clerical	21.2	21.8	17.9	20.9	21.8
Technical and paraprofessional	8.0	8.5	5.6	7.9	8.3
Skilled craft	3.4	3.6	2.0	3.6	2.9
Service/maintenance	13.2	13.8	9.8	13.3	13.1
1983					
Total	100.0	100.0	100.0	100.0	100.0
Professional	54.8	53.1	63.6	55.0	54.6
Faculty (instruction and research)	33.2	30.0	49.3	34.4	30.6
Administrative	6.7	6.6	7.2	5.8	8.6
Support professional	15.0	16.5	7.0	14.8	15.4
Nonprofessional	45.2	46.9	36.4	45.0	45.4
Secretarial and clerical	21.0	21.6	18.0	20.8	21.3
Technical and paraprofessional	8.3	8.7	6.5	8.1	8.7
Skilled craft	3.3	3.5	2.1	3.5	2.8
Service/maintenance	12.6	13.1	9.8	12.6	12.5
1987					
Total	100.0	100.0	100.0	100.0	100.0
Professional	56.9	55.1	66.4	57.5	55.7
Faculty (instruction and research)	32.8	29.2	51.2	34.3	29.8
Administrative	7.0	7.1	6.8	5.9	9.3
Support professional	17.1	18.8	8.4	17.3	16.7
Nonprofessional	43.1	44.9	33.6	42.5	44.3
Secretarial and clerical	20.6	21.3	16.9	19.9	21.8
Technical and paraprofessional	8.0	8.3	6.2	7.8	8.2
Skilled craft	3.2	3.4	1.9	3.4	2.7
Service/maintenance	11.4	11.9	8.6	11.3	11.6
1989					
Total	100.0	100.0	100.0	100.0	100.0
Professional	57.2	55.9	64.3	57.2	57.3
Faculty (instruction and research)	31.6	28.8	47.1	32.3	30.0
Administrative	7.1	7.2	7.1	6.1	9.5
Support professional	18.5	20.0	10.1	18.8	17.8
Nonprofessional	42.8	44.1	35.7	42.8	42.7
Secretarial and clerical	20.3	20.7	18.3	20.0	21.0
Technical and paraprofessional	8.0	8.2	6.7	8.3	7.4
Skilled craft	3.3	3.6	2.0	3.6	2.8
Service/maintenance	11.1	11.5	8.6	10.9	11.5

NOTE: See supplemental note to *Indicator 54* for description of staff categories and calculation of FTE staff. Percentage distribution differs from that derived from the *Digest of Education Statistics 1991* (table 208) because it excludes instruction and research assistants.

SOURCE: U.S. Equal Opportunity Commission, Higher Education Staff Survey (EEO-6), 1977, 1981, and 1983. U.S. Department of Education, National Center for Education Statistics, Fall Staff in Postsecondary Institutions Survey, 1987 and 1989.

Table 54-2 FTE staff per 100 FTE students in higher education institutions, by type and control of institution and occupation: Fall, selected years 1977–1989

Occupation	Total	4-year	2-year	Public	Private
1977					
Total	18.3	22.0	9.6	16.7	23.5
Professional	9.7	11.2	6.1	8.9	12.3
Faculty (instruction and research)	6.2	6.7	4.9	5.9	7.2
Administrative	1.2	1.4	0.7	1.0	2.1
Support professional	2.3	3.0	0.5	2.0	3.0
Nonprofessional	8.6	10.8	3.5	7.8	11.3
Secretarial and clerical	4.0	4.9	1.8	3.6	5.3
Technical and paraprofessional	1.4	1.8	0.5	1.3	1.8
Skilled craft	0.6	0.8	0.2	0.6	0.7
Service/maintenance	2.6	3.3	1.0	2.3	3.5
1981					
Total	18.2	22.1	9.3	16.7	22.6
Professional	9.9	11.6	6.0	9.1	12.2
Faculty (instruction and research)	6.0	6.6	4.8	5.7	6.8
Administrative	1.3	1.5	0.7	1.0	2.1
Support professional	2.6	3.5	0.6	2.4	3.2
Nonprofessional	8.3	10.6	3.3	7.6	10.4
Secretarial and clerical	3.9	4.8	1.7	3.5	4.9
Technical and paraprofessional	1.5	1.9	0.5	1.3	1.9
Skilled craft	0.6	0.8	0.2	0.6	0.7
Service/maintenance	2.4	3.1	0.9	2.2	3.0
1983					
Total	18.1	22.0	9.6	16.2	24.0
Professional	10.0	11.7	6.1	8.9	13.1
Faculty (instruction and research)	6.0	6.6	4.7	5.6	7.3
Administrative	1.2	1.5	0.7	0.9	2.1
Support professional	2.7	3.6	0.7	2.4	3.7
Nonprofessional	8.2	10.3	3.5	7.3	10.9
Secretarial and clerical	3.8	4.7	1.7	3.4	5.1
Technical and paraprofessional	1.5	1.9	0.6	1.3	2.1
Skilled craft	0.6	0.8	0.2	0.6	0.7
Service/maintenance	2.3	2.9	0.9	2.0	3.0
1987					
Total	20.3	24.1	11.2	17.9	27.5
Professional	11.5	13.3	7.4	10.3	15.3
Faculty (instruction and research)	6.6	7.0	5.7	6.1	8.2
Administrative	1.4	1.7	0.8	1.0	2.5
Support professional	3.5	4.5	0.9	3.1	4.6
Nonprofessional	8.7	10.8	3.8	7.6	12.2
Secretarial and clerical	4.2	5.1	1.9	3.6	6.0
Technical and paraprofessional	1.6	2.0	0.7	1.4	2.2
Skilled craft	0.6	0.8	0.2	0.6	0.7
Service/maintenance	2.3	2.9	1.0	2.0	3.2
1989					
Total	20.3	24.6	10.4	18.4	26.1
Professional	11.6	13.7	6.7	10.5	14.9
Faculty (instruction and research)	6.4	7.1	4.9	5.9	7.8
Administrative	1.4	1.8	0.7	1.1	2.5
Support professional	3.8	4.9	1.0	3.5	4.6
Nonprofessional	8.7	10.8	3.7	7.9	11.2
Secretarial and clerical	4.1	5.1	1.9	3.7	5.5
Technical and paraprofessional	1.6	2.0	0.7	1.5	1.9
Skilled craft	0.7	0.9	0.2	0.7	0.7
Service/maintenance	2.2	2.8	0.9	2.0	3.0

NOTE: See supplemental note to *Indicator 54* for description of staff categories and calculation of FTE staff.

SOURCE: U.S. Equal Opportunity Commission, Higher Education Staff Survey (EEO-6), 1977, 1981, and 1983. U.S. Department of Education, National Center for Education Statistics, Fall Staff in Postsecondary Institutions Survey, 1987 and 1989.

Table 54-3 Number of FTE staff in higher education institutions by type and control of institution and occupation: Fall, selected years 1977–1989

Occupation	Total	4-year	2-year	Public	Private
1977					
Total	1,542,408	1,303,623	238,785	1,067,419	474,990
Professional	817,230	664,871	152,359	569,911	247,318
Faculty (instruction and research)	523,184	400,517	122,667	378,527	144,656
Administrative	103,281	85,692	17,589	61,501	41,780
Support professional	190,765	178,662	12,103	129,883	60,882
Nonprofessional	725,179	638,753	86,426	497,508	227,671
Secretarial and clerical	334,293	290,323	43,970	227,411	106,881
Technical and paraprofessional	119,825	107,335	12,490	83,569	36,256
Skilled craft	51,783	47,222	4,560	37,113	14,670
Service/maintenance	219,279	193,873	25,406	149,415	69,864
1981					
Total	1,639,410	1,383,118	256,292	1,135,048	504,362
Professional	888,956	722,824	166,132	617,319	271,638
Faculty (instruction and research)	542,526	411,076	131,450	389,705	152,822
Administrative	113,078	93,702	19,376	66,742	46,336
Support professional	233,352	218,046	15,306	160,872	72,481
Nonprofessional	750,454	660,293	90,160	517,729	232,725
Secretarial and clerical	347,099	301,288	45,811	237,286	109,813
Technical and paraprofessional	131,465	117,228	14,237	89,532	41,934
Skilled craft	55,303	50,251	5,052	40,508	14,795
Service/maintenance	216,586	191,526	25,060	150,404	66,183
1983					
Total	1,663,334	1,390,636	272,698	1,115,627	547,707
Professional	912,255	738,934	173,322	613,066	299,190
Faculty (instruction and research)	551,578	417,098	134,480	383,833	167,746
Administrative	111,514	91,887	19,627	64,640	46,874
Support professional	249,163	229,948	19,215	164,593	84,570
Nonprofessional	751,079	651,702	99,376	502,561	248,517
Secretarial and clerical	349,148	299,944	49,204	232,274	116,874
Technical and paraprofessional	138,386	120,590	17,796	90,841	47,545
Skilled craft	54,554	48,938	5,616	39,000	15,554
Service/maintenance	208,991	182,230	26,760	140,447	68,543
1987					
Total	1,870,617	1,563,807	306,810	1,241,247	629,370
Professional	1,064,549	860,968	203,581	713,710	350,839
Faculty (instruction and research)	613,320	456,368	156,952	426,008	187,312
Administrative	131,075	110,267	20,808	72,780	58,295
Support professional	320,154	294,333	25,821	214,922	105,232
Nonprofessional	806,068	702,839	103,229	527,538	278,530
Secretarial and clerical	385,017	333,063	51,954	247,516	137,501
Technical and paraprofessional	148,829	129,740	19,089	97,271	51,559
Skilled craft	58,955	53,172	5,783	42,218	16,737
Service/maintenance	213,267	186,864	26,403	140,533	72,733
1989					
Total	1,975,552	1,670,433	305,119	1,350,286	625,266
Professional	1,130,662	934,480	196,181	772,677	357,985
Faculty (instruction and research)	624,102	480,299	143,802	436,376	187,726
Administrative	141,120	119,489	21,631	81,881	59,239
Support professional	365,440	334,691	30,748	254,419	111,020
Nonprofessional	844,890	735,952	108,938	577,609	267,281
Secretarial and clerical	401,731	345,927	55,804	270,439	131,292
Technical and paraprofessional	158,315	137,755	20,560	111,895	46,420
Skilled craft	65,939	59,753	6,186	48,238	17,701
Service/maintenance	218,905	192,517	26,388	147,037	71,868

NOTE: See supplemental note to *Indicator 54* for description of staff categories and calculation of FTE staff. Number of FTE staff in 'total' and 'professional' categories for 1987 differ from those reported in the Digest of Education Statistics 1991 (table 208) because it excludes instruction and research assistants.

SOURCE: U.S. Equal Opportunity Commission, Higher Education Staff Survey (EEO-6), 1977, 1981, and 1983. U.S. Department of Education, National Center for Education Statistics, Fall Staff in Postsecondary Institutions Survey, 1987 and 1989.

Note on the definition of staff occupations

Administrative, executive, and managerial: Persons whose assignments require primary and major responsibility for management of the institution or a customarily recognized department or subdivision thereof. Includes officers holding titles such as president, vice president, dean, director, or the equivalent, as well as officers subordinate to any of these administrators with such titles as associate dean, assistant dean, executive officer of academic departments, or the equivalent if their principal activity is administrative.

Faculty (instruction/research/public service): Persons conducting instruction, research, or public service as a principal activity (or activities) and who hold academic-rank titles of professor, associate professor, assistant professor, instructor, lecturer, or the equivalent of any of these academic ranks. If their principal activity is instructional, this category also includes deans, directors, or the equivalent, as well as associate deans, assistant deans, and executive officers of academic departments (chairperson, heads, or the equivalent). This category does *not* include student teaching or research assistants or medical interns or residents.

Support professional: Persons employed for the primary purpose of performing academic support, student service, and institutional support activities, whose assignments require either college graduation or experience of such kind and amount as to provide a comparable background. Includes employees such as lawyers, librarians, accountants, student personnel workers, counselors, systems analysts, and coaches, for example.

Technical and paraprofessional: Persons whose assignments require specialized knowledge or skills which may be acquired through experience or academic work, such as is offered in many 2-year technical institutes, junior colleges, or through equivalent on-the-job training. Includes computer programmers and operators, drafters, engineering aides, junior engineers, mathematical aides, licensed practical or vocational nurses, dieticians, photographers, radio operators, scientific assistants, technical illustrators, technicians (medical, dental, electronic, physical sciences), and similar occupational categories which are institutionally defined as technical assignments. Includes persons who perform some of the duties of a professional or technician in a supportive role, which usually require less formal training and/or experience than normally required for professional or technical status.

Clerical and secretarial: Persons whose assignments typically are associated with clerical activities or are specifically of a secretarial nature. Includes those who are responsible for internal and external communications, recording and retrieval of data (other than computer programmers) and/or information and other paper work required in an office, such as bookkeepers, stenographers, clerk typists, office-machine operators, statistical clerks, and payroll clerks. Also includes sales clerks such as those employed in the bookstore and library clerks who are not recognized as librarians.

Skilled craft: Persons whose assignments typically require special manual skills and a thorough and comprehensive knowledge of the processes involved in the work, acquired through on-the-job training and experience or through apprenticeship or other formal training programs. Includes mechanics and repairers, electricians, stationary engineers, skilled machinists, carpenters, compositors and typesetters, and upholsterers.

Service/maintenance: Persons whose assignments require limited degrees of previously acquired skills and knowledge and workers who perform duties which result in or contribute to the comfort, convenience and hygiene of personnel and the student body or which contribute to the upkeep and care of buildings, facilities or grounds of the institutional property. Includes chauffeurs, laundry and dry cleaning operatives, cafeteria and restaurant workers, truck drivers, bus drivers, garage laborers, custodial personnel, gardeners and groundskeepers, refuse collectors, construction laborers, and security personnel.

Handling of instruction/research assistants

The 1987 and 1989 Higher Education Staff Surveys (EEO-6) obtained data for "instruction/research assistants." These employees are defined as those employed on a part-time basis for the primary purpose of assisting in classroom or laboratory instruction or in the conduct of research. The positions are typically held by graduate students having such titles as teaching assistant, teaching associate, teaching fellow, or research assistant.

The 1977-1983 surveys did not expressly request data for these assistants, and it is unclear how they were classified. There is some evidence, however, that they were not counted. When instruction/research assistants were classified with other support professionals for 1987 and 1989, support professionals increased substantially as a percentage of FTE staff (from 15.0 in 1983 to 20.0 in 1987 percent). Such an increase is out of line with the rest of the time series. For this reason, 1987 and 1989 data on instruction/research assistants are excluded from this indicator.

Calculation of FTE staff

The number of FTE employees is calculated as the number of full-time employees plus a fraction of part-time employees. For this indicator, that fraction, the FTE ratio, was derived from actual counts of part-time, full-time, and FTE staff gathered in the 1976 Fall Staff in Higher Education Survey conducted by the U.S. Department of Education. The 1976 data are reported in the *Digest of Education Statistics 1991*, table 208. The FTE ratio for each occupational group, by control of institution, is as follows.

Occupation	Total	Public	Private
Faculty	.33339	.32796	.34604
Administrative	.46152	.44626	.47748
Support professional	.45464	.46903	.42666
Nonprofessional	.40912	.40420	.41835

The ratios used to derive FTE staff for 4-year and 2-year institutions are the same as for total institutions.

Table 55-1 Average annual and beginning salary (in constant 1991 dollars) of teachers in public elementary and secondary schools: Selected years 1960–1991

School year ending	All teachers	Elementary teachers	Secondary teachers	Beginning teacher salary
1960	$23,034	$22,204	$24,330	—
1962	24,927	24,136	26,102	—
1964	26,397	25,561	27,591	—
1966	27,321	26,453	28,484	—
1968	29,116	28,273	30,171	—
1970	30,347	29,594	31,279	—
1971	31,237	30,404	32,248	—
1972	31,692	30,775	32,757	$22,761
1973	31,278	30,414	32,302	—
1974	29,820	29,091	30,670	22,311
1975	29,535	28,756	30,446	—
1976	30.227	29,459	31,035	21,794
1977	30,080	29,257	31,030	—
1978	29,724	28,985	30,570	21,065
1979	28,263	27,603	29,049	—
1980	26,455	25,791	27,265	19,342
1981	26,495	25,873	27,243	—
1982	27,263	26,668	28,014	19,151
1983	28,362	27,721	29,179	—
1984	28,817	28,229	29,631	20,340
1985	29,939	29,431	30,683	—
1986	31,384	30,785	32,190	22,003
1987	31,920	31,302	32,740	—
1988	32,334	31,720	33,240	22,582
1989	32,551	31,942	33,303	22,715
1990	32,721	32,134	33,438	22,708
1991	33,015	32,448	33,701	22,830

— Not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1991*, table 72; National Education Association, Estimates of School Statistics, 1990–1991; and unpublished data. American Federation of Teachers, Survey & Analysis of Salary Trends 1991, September 1991.

Table 55-2 Average total earnings, base salary, and other compensation, and percentage of teachers receiving compensation for full-time public school teachers, by selected school characteristics: 1987–1988

School characteristics	Average amount for teachers*					Percent of teachers receiving		
	Total earnings	Base Salary	Other school year compensation	Summer supplemental	Non-school	Other school year compensation	Summer supplemental	Non-school
Total	$28,189	$26,230	$ 2,134	$ 1,810	$ 4,489	30.4	15.5	24.1
Urban	30,047	27,915	2,208	1,998	4,873	30.1	19.0	23.4
Level								
Elementary	28,722	27,292	1,665	1,867	3,891	22.1	16.4	18.8
Secondary	32,045	28,839	2,614	2,037	5,760	44.0	22.9	30.6
Combined	31,808	28,910	2,974	3,010	6,077	23.7	24.6	26.7
Minority enrollment								
Less than 20 percent	29,983	27,739	1,838	1,770	5,259	33.2	18.4	26.1
20 percent or more	30,069	27,976	2,356	2,073	4,715	29.0	19.3	22.4
School size								
Less than 150	28,469	25,565	2,307	2,616	5,073	25.4	32.1	24.8
150 to 499	28,686	27,374	1,516	1,732	4,354	21.4	15.3	18.3
500 to 749	28,940	27,262	1,732	1,738	4,547	24.1	15.3	22.0
750 or more	31,366	28,615	2,567	2,157	5,190	37.7	22.6	26.5
Suburban	31,372	29,170	2,096	1,619	4,812	38.0	18.5	24.0
Level								
Elementary	30,031	28,526	1,568	1,400	4,382	27.8	15.8	19.9
Secondary	33,225	30,116	2,479	1,809	5,189	51.8	21.7	29.4
Combined	29,728	27,136	1,895	1,949	5,019	33.8	25.9	25.8
Minority enrollment								
Less than 20 percent	31,472	29,320	1,974	1,446	4,937	40.1	17.4	23.7
20 percent or more	31,189	28,894	2,358	1,891	4,586	34.2	20.4	24.6
School size								
Less than 150	29,398	26,516	3,589	2,804	5,251	30.0	28.4	20.8
150 to 499	30,788	28,901	1,438	1,411	5,068	30.5	18.2	22.5
500 to 749	30,833	29,316	1,891	1,255	4,303	35.6	15.3	20.8
750 or more	32,027	29,297	2,420	1,836	4,901	43.6	20.1	26.6
Rural - small city	25,912	23,983	1,861	1,767	4,087	36.7	16.1	24.3
Level								
Elementary	25,024	23,719	1,638	1,523	3,514	26.0	14.6	19.8
Secondary	27,579	24,751	2,055	1,993	4,584	52.1	18.7	30.7
Combined	24,349	22,037	1,722	2,294	4,557	43.1	14.5	27.6
Minority enrollment								
Less than 20 percent	26,130	24,169	1,770	1,708	3,967	39.8	16.2	25.4
20 percent or more	25,386	23,537	2,158	1,914	4,432	29.3	15.8	21.5
School size								
Less than 150	23,325	21,387	1,469	2,094	4,143	39.6	17.3	24.8
150 to 499	25,198	23,385	1,770	1,791	4,106	35.3	14.5	23.2
500 to 749	25,937	24,201	1,880	1,653	3,838	33.4	15.9	23.1
750 or more	27,869	25,512	2,079	1,769	4,277	42.3	19.1	27.4

* Total earnings and base salary were calculated for all teachers. Other school year compensation, summer supplemental, and non-school were calculated for only those teachers who received these.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988, 1991.

Table 55-3 Average total earnings, base salary, and other compensation, and percentage of teachers receiving compensation for full-time private school teachers, by selected school characteristics: 1987–1988

School characteristics	Average amount for teachers*					Percent of teachers receiving		
	Total earnings	Base salary	Other school year compensation	Summer supplemental	Non-school	Other school year compensation	Summer supplemental	Non-school
Total	$18,318	$16,562	$ 2,026	$ 2,168	$ 3,277	15.8	12.8	32.2
Urban	18,497	16,670	1,798	1,924	3,477	22.8	15.1	31.1
Level								
Elementary	16,837	15,603	1,285	1,869	3,048	10.5	11.4	26.8
Secondary	21,339	18,886	1,531	1,877	3,707	51.2	17.1	38.7
Combined	20,004	17,254	2,809	2,035	4,096	27.2	22.6	34.6
Minority enrollment								
Less than 20 percent	18,860	16,943	1,907	1,885	3,399	24.3	13.4	31.6
20 percent or more	17,860	16,189	1,566	1,974	3,617	20.1	18.0	30.1
School size								
Less than 150	15,686	13,946	3,184	2,095	3,114	8.9	23.3	31.8
150 to 499	17,453	15,972	1,305	1,991	3,253	15.5	11.9	27.5
500 to 749	20,166	17,966	1,570	1,735	3,733	34.7	15.0	40.6
750 or more	23,159	20,429	2,292	1,729	4,162	49.9	18.4	32.8
Suburban	19,758	17,685	2,198	2,159	3,369	24.3	17.3	31.0
Level								
Elementary	17,025	15,471	1,891	1,977	3,489	12.1	14.7	25.9
Secondary	24,552	20,835	2,579	—	4,397	58.4	17.4	37.9
Combined	21,149	19,229	1,919	2,477	2,658	23.7	21.1	34.9
Minority enrollment								
Less than 20 percent	19,474	17,360	2,203	2,343	3,448	25.2	15.8	30.0
20 percent or more	20,978	19,086	2,175	1,617	3,078	20.5	23.9	35.3
School size								
Less than 150	17,841	15,717	3,329	2,853	3,525	11.9	22.3	28.5
150 to 499	18,421	16,483	2,254	2,236	3,165	19.0	15.1	31.4
500 to 749	20,339	18,384	1,586	1,960	2,928	23.5	24.1	31.8
750 or more	23,131	20,746	2,227	—	4,062	44.0	11.9	31.2
Rural - small city	16,021	14,456	2,408	2,162	2,927	14.2	13.6	33.5
Level								
Elementary	14,398	13,304	1,400	2,472	2,421	8.3	10.2	29.0
Secondary	19,759	17,553	1,998	2,311	2,885	32.6	20.9	43.7
Combined	17,167	15,039	3,855	1,703	3,726	15.9	16.3	36.8
Minority enrollment								
Less than 20 percent	15,512	14,042	2,119	2,183	2,778	14.4	13.6	32.3
20 percent or more	19,093	16,929	—	2,025	3,649	12.9	13.1	40.6
School size								
Less than 150	14,767	13,289	2,052	2,065	2,722	10.2	15.5	37.8
150 to 499	16,359	14,805	2,785	2,308	3,037	14.9	12.0	30.4
500 to 749	17,812	16,377	—	—	—	17.9	12.1	33.0
750 or more	—	—	—	—	—	—	—	—

* Total earnings and base salary were calculated for all teachers. Other school year compensation, summer supplemental, and non-school were calculated for only those teachers who received these.

— Too few cases to make a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988, 1991.

Table 55-4 Average starting salary of schools for full-time, public and private school teachers, by selected school characteristics: 1987–1988

School characteristic	Public			Private		
	Bachelor's degree, no experience	Master's degree, no experience	Master's degree, 20 years or more experience	Bachelor's degree, no experience	Master's degree, no experience	Master's degree, 20 years or more experience
Total	$18,035	$19,676	$30,454	$12,489	$13,676	$19,059
Urban						
Level						
Elementary	19,039	20,629	33,070	12,724	14,010	19,305
Secondary	19,265	20,868	33,470	14,202	15,511	23,213
Combined	18,874	21,002	33,770	12,611	13,896	18,834
Minority enrollment						
Less than 20 percent	18,425	20,168	32,350	12,834	14,201	19,777
20 percent or more	19,279	20,835	33,414	13,325	14,549	20,442
School size						
Less than 150	19,141	20,905	33,441	12,446	13,738	18,030
150 to 299	18,678	20,260	32,858	13,032	14,220	20,033
300 to 499	18,716	20,318	32,399	13,448	15,117	21,794
500 to 749	19,110	20,681	33,141	14,039	15,299	23,511
750 or more	19,477	21,101	33,960	15,147	16,277	25,525
Suburban						
Level						
Elementary	19,086	20,944	33,845	12,708	13,814	18,989
Secondary	19,190	21,065	33,765	14,818	16,116	25,416
Combined	20,257	22,611	35,149	13,344	14,501	21,123
Minority enrollment						
Less than 20 percent	18,821	20,754	33,923	13,038	14,143	20,117
20 percent or more	19,646	21,374	33,650	13,715	15,128	20,977
School size						
Less than 150	18,766	20,658	32,135	12,820	13,910	17,927
150 to 299	18,390	20,313	32,553	13,103	14,393	20,823
300 to 499	19,013	20,894	34,114	13,440	14,592	21,642
500 to 749	19,286	21,179	34,286	13,270	14,366	22,294
750 or more	19,414	21,178	33,757	14,917	16,202	27,089
Rural*						
Level						
Elementary	16,987	18,568	27,482	10,396	11,397	15,676
Secondary	16,906	18,318	27,126	13,024	14,439	20,834
Combined	16,883	18,491	26,115	10,727	11,390	14,613
Minority enrollment						
Less than 20 percent	16,674	18,237	27,057	10,623	11,626	15,735
20 percent or more	17,898	19,322	27,778	13,339	14,314	19,011
School size						
Less than 150	16,724	18,464	26,431	10,360	11,288	15,059
150 to 299	16,695	18,208	26,741	11,848	12,974	17,821
300 to 499	16,977	18,421	27,547	13,155	14,334	20,494
500 to 749	17,383	18,817	28,134	13,643	15,697	21,523
750 or more	18,011	19,507	28,873	14,029	14,718	24,410

* Does not include small city.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

Table 55-5 Standard errors for estimated numbers and percentages in table 55-2

School characteristics	Average amount for teachers*					Percent of teachers receiving		
	Total earnings	Base salary	Other school year compensation	Summer supplemental	Non-school	Other school year compensation	Summer supplemental	Non-school
Total	$ 68.5	$ 60.5	$ 45.2	$ 32.4	$ 89.0	0.4	0.3	0.3
Urban	147.3	134.5	99.9	64.3	167.5	0.7	0.6	0.6
Level								
Elementary	155.9	128.7	149.3	110.2	237.1	0.8	0.8	0.7
Secondary	300.3	250.3	123.7	67.0	247.4	1.3	0.8	0.9
Combined	620.6	592.9	989.1	425.5	1,032.1	3.4	3.0	2.7
Minority enrollment								
Less than 20 percent	292.5	257.1	138.4	134.1	364.1	1.6	1.2	1.2
20 percent or more	155.1	138.1	131.9	74.4	187.3	0.9	0.7	0.7
School size								
Less than 150	1,176.6	974.2	640.3	235.2	714.1	4.1	4.9	3.6
150 to 499	247.1	210.3	239.8	107.6	459.5	1.2	1.1	0.9
500 to 749	328.0	304.1	225.9	132.3	353.0	1.5	1.2	1.1
750 or more	289.2	252.6	121.3	76.7	206.2	1.1	0.8	0.9
Suburban	204.8	190.1	85.8	70.3	241.9	0.8	0.6	0.7
Level								
Elementary	285.4	285.3	159.1	119.4	370.0	1.0	0.6	0.9
Secondary	306.0	252.6	99.6	78.3	269.2	1.0	1.0	1.0
Combined	959.2	658.6	436.0	301.0	1,123.9	3.8	3.6	3.8
Minority enrollment								
Less than 20 percent	232.8	233.2	91.5	97.6	244.3	0.8	0.7	0.8
20 percent or more	411.6	328.7	189.9	105.5	366.4	1.3	0.9	1.3
School size								
Less than 150	1,296.9	937.5	1,579.1	369.6	1,276.2	4.7	7.2	5.8
150 to 499	348.1	367.0	174.2	136.9	636.0	1.2	1.2	1.5
500 to 749	364.9	329.8	238.9	80.1	425.8	2.3	1.0	1.4
750 or more	375.4	307.5	118.4	—	240.1	1.3	0.9	1.0
Rural - small city	108.8	90.0	41.3	48.1	116.8	0.5	0.4	0.3
Level								
Elementary	148.2	122.1	85.5	69.1	179.4	0.6	0.5	0.4
Secondary	161.1	135.7	46.0	73.7	164.8	0.8	0.5	0.6
Combined	304.8	242.5	104.3	127.7	413.0	1.2	1.1	1.3
Minority enrollment								
Less than 20 percent	112.6	99.6	44.3	59.6	116.8	0.6	0.5	0.6
20 percent or more	193.7	143.6	108.1	101.0	282.2	0.9	0.8	0.6
School size								
Less than 150	391.2	346.5	115.4	244.3	421.4	1.7	2.4	1.3
150 to 499	151.7	117.7	67.0	79.0	199.2	0.7	0.5	0.6
500 to 749	196.8	187.1	91.2	96.6	185.1	1.0	0.8	0.8
750 or more	273.4	204.0	74.7	85.9	286.7	1.2	0.8	0.8

* Total earnings and base salary were calculated for all teachers. Other school year compensation, summer supplemental, and non-school were calculated for only those teachers who received these.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988, 1991.

Table 55-6 Standard errors for estimated numbers and percentages in table 55-3

School characteristics	Average amount for teachers*: Total earnings	Average amount for teachers*: Base salary	Average amount for teachers*: Other school year compensation	Average amount for teachers*: Summer supplemental	Average amount for teachers*: Non-school	Percent of teachers receiving: Other school year compensation	Percent of teachers receiving: Summer supplemental	Percent of teachers receiving: Non-school
Total	$197.1	$155.4	$186.7	$ 128.9	$ 151.3	0.8	0.8	1.0
Urban	298.5	279.6	238.0	97.0	227.1	1.5	1.3	1.5
Level								
Elementary	401.2	363.3	266.8	243.4	330.8	1.5	1.3	1.6
Secondary	672.6	514.6	261.9	260.7	378.2	4.1	3.3	3.7
Combined	865.8	754.1	580.3	211.7	467.9	4.9	3.2	3.5
Minority enrollment								
Less than 20 percent	461.0	434.0	326.5	159.5	246.5	2.0	1.5	1.9
20 percent or more	399.0	285.6	336.7	192.2	483.1	2.3	2.0	2.1
School size								
Less than 150	502.9	422.0	1,172.8	223.6	436.0	1.7	3.5	4.2
150 to 499	456.4	447.2	152.2	211.2	375.5	1.6	1.3	1.5
500 to 749	592.1	473.1	320.1	171.5	466.5	4.9	3.2	5.3
750 or more	1,042.9	773.5	615.7	217.9	567.0	7.5	3.8	4.9
Suburban	476.2	386.5	254.0	274.7	315.0	1.9	1.4	2.6
Level								
Elementary	470.8	362.2	414.9	420.3	407.2	2.0	1.8	2.2
Secondary	1,137.6	998.5	461.3	—	1,238.3	5.9	4.7	8.3
Combined	544.7	548.5	456.3	457.6	445.9	3.1	3.1	4.2
Minority enrollment								
Less than 20 percent	428.4	374.5	312.8	363.7	360.6	2.0	1.7	2.5
20 percent or more	1,014.3	807.5	701.9	220.2	418.8	5.2	3.5	7.3
School size								
Less than 150	1,686.8	1,192.7	1,484.2	662.1	1,087.2	3.7	2.8	4.5
150 to 499	469.7	342.6	468.7	578.0	347.6	2.2	2.0	3.4
500 to 749	710.6	703.9	395.3	291.3	398.7	5.2	4.7	4.9
750 or more	920.4	783.3	814.6	—	1,261.3	5.7	3.3	6.3
Rural - small city	336.7	313.5	524.5	186.3	219.9	1.3	1.0	1.7
Level								
Elementary	274.1	232.2	316.2	441.5	247.3	1.2	1.0	1.4
Secondary	505.1	528.4	718.6	249.5	350.0	3.6	3.4	5.3
Combined	781.5	702.6	1,390.6	194.5	449.6	2.8	2.0	4.4
Minority enrollment								
Less than 20 percent	325.5	307.0	523.6	195.9	233.3	1.1	1.1	1.6
20 percent or more	1,084.4	1,079.6	—	483.7	442.0	4.6	3.6	6.7
School size								
Less than 150	533.2	508.7	1,001.2	299.7	348.5	1.6	1.9	3.3
150 to 499	391.5	334.9	757.4	335.6	329.2	1.7	1.4	2.3
500 to 749	1,114.9	1,083.0	—	—	—	5.5	4.0	6.6
750 or more	—	—	—	—	—	—	—	—

* Total earnings and base salary were calculated for all teachers. Other school year compensation, summer supplemental, and non-school were calculated for only those teachers who received these.

— Too few cases to make a reliable estimate.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988, 1991.

Table 55-7 Standard errors for estimated numbers in table 55-4

School characteristic	Public			Private		
	Bachelor's degree, no experience	Master's degree, no experience	Master's degree, 20 years or more experience	Bachelor's degree, no experience	Master's degree, no experience	Master's degree, 20 years or more experience
Total	$ 22	$ 26	$ 52	$ 141	$ 164	$ 254
Urban						
Level						
Elementary	57	60	127	139	164	314
Secondary	105	98	193	448	416	793
Combined	282	500	832	517	571	897
Minority enrollment						
Less than 20 percent	89	103	230	181	208	333
20 percent or more	56	64	125	202	201	445
School size						
Less than 150	215	254	435	312	342	576
150 to 299	275	266	602	170	211	396
300 to 499	114	144	282	274	335	466
500 to 749	73	97	200	262	291	541
750 or more	77	76	182	358	410	773
Suburban						
Level						
Elementary	62	68	199	241	314	582
Secondary	107	137	295	307	224	789
Combined	981	1,083	1,458	363	438	853
Minority enrollment						
Less than 20 percent	60	64	189	184	211	407
20 percent or more	119	139	298	496	661	1,057
School size						
Less than 150	471	539	1,078	413	482	928
150 to 299	240	290	723	317	390	551
300 to 499	104	120	432	294	327	633
500 to 749	106	142	260	297	309	768
750 or more	102	117	287	412	474	868
Rural*						
Level						
Elementary	65	69	146	743	853	1,184
Secondary	85	91	197	473	612	810
Combined	125	163	261	1,191	1,350	1,716
Minority enrollment						
Less than 20 percent	50	49	110	620	731	948
20 percent or more	99	130	205	818	1,123	1,959
School size						
Less than 150	136	155	333	767	539	1,199
150 to 299	80	90	176	626	290	1,084
300 to 499	64	78	159	550	120	949
500 to 749	159	161	256	1,543	142	2,818
750 or more	127	162	316	1,108	117	765

* Does not include small city.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Schools and Staffing Survey, 1987–1988.

Table 56-1 Average salaries in constant (1991) dollars of full-time faculty in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–90

Year	All institutions			Public instituions			Public insititutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
All institutions									
1972	$59,921	$45,376	$37,507	$60,530	$46,181	$38,161	$58,721	$43,566	$35,983
1973	58,972	44,800	36,982	59,780	45,807	37,768	57,388	42,561	35,176
1975	53,950	40,920	33,719	54,760	42,044	34,648	52,268	38,271	31,557
1976	54,240	40,845	33,504	55,056	41,979	34,418	52,609	38,191	31,467
1977	53,591	40,331	33,026	54,267	41,346	33,852	52,149	37,821	31,136
1978	52,617	39,750	32,513	53,371	40,791	33,405	50,955	37,100	30,436
1979	49,768	37,692	30,786	50,372	38,664	31,645	48,379	35,197	28,798
1980	47,026	35,535	28,932	47,686	36,512	29,795	45,499	33,098	27,007
1981	46,180	34,859	28,383	46,667	35,697	29,179	45,040	32,786	26,680
1982	47,441	35,821	29,178	47,649	36,549	29,949	46,943	33,989	27,550
1983	48,707	36,895	30,227	48,615	37,477	30,888	48,928	35,463	28,854
1985	50,418	37,988	31,294	50,136	38,508	31,912	51,099	36,743	30,022
1986	52,642	39,589	32,727	52,717	40,311	33,566	52,455	37,861	31,000
1988	54,284	40,652	33,587	54,342	41,533	34,448	54,204	38,821	31,667
1990	55,152	41,129	34,145	55,209	41,952	34,966	55,032	39,492	32,685
4-year institutions									
1972	$60,333	$45,407	$37,474	$61,059	$46,216	$38,137	$58,957	$43,723	$36,083
1973	59,405	44,769	36,851	60,368	45,796	37,640	57,641	42,687	35,256
1975	54,328	40,788	33,479	55,306	41,930	34,401	52,458	38,391	31,653
1976	54,644	40,827	33,431	55,608	42,036	34,409	52,849	38,314	31,565
1977	53,884	40,317	32,974	54,672	41,419	33,870	52,293	37,898	31,208
1978	52,879	39,715	32,369	53,735	40,845	33,317	51,110	37,182	30,503
1979	50,059	37,697	30,679	50,776	38,767	31,596	48,514	35,283	28,877
1980	47,358	35,565	28,842	48,151	36,663	29,770	45,648	33,176	27,083
1981	46,575	34,935	28,331	47,215	35,887	29,196	45,183	32,866	26,754
1982	47,850	35,896	29,140	48,206	36,742	29,989	47,059	34,047	27,620
1983	49,186	37,021	30,227	49,225	37,703	30,956	49,101	35,563	28,942
1985	51,059	38,173	31,374	50,966	38,812	32,079	51,263	36,851	30,138
1986	53,308	39,779	32,798	53,609	40,654	33,752	52,633	37,969	31,120
1988	54,992	40,845	33,703	55,289	41,852	34,658	54,376	38,928	32,125
1990	55,890	41,406	34,284	56,250	42,440	35,238	55,205	39,601	32,781
2-year institutions									
1972	$48,219	$44,933	$37,867	$49,692	$45,829	$38,360	$33,687	$33,452	$30,308
1973	51,236	45,177	38,169	52,509	45,897	38,598	32,877	34,045	30,531
1975	48,155	42,222	35,419	48,998	42,848	35,866	31,664	30,852	27,034
1976	47,428	41,021	34,061	48,588	41,586	34,470	29,749	30,265	26,612
1977	47,284	40,459	33,438	48,102	40,813	33,749	31,960	31,440	27,005
1978	47,777	40,081	33,543	48,617	40,425	33,826	29,605	30,195	26,050
1979	44,599	37,647	31,566	45,242	37,989	31,889	29,699	28,597	24,194
1980	41,581	35,271	29,598	42,219	35,571	29,917	27,423	26,806	22,504
1981	39,836	34,163	28,781	40,364	34,458	29,087	27,998	26,557	22,019
1982	41,291	35,152	29,468	41,664	35,350	29,750	30,276	28,449	23,015
1983	42,046	35,812	30,230	42,564	36,111	30,548	28,546	26,983	23,523
1985	42,495	36,408	30,670	42,884	36,709	31,046	29,914	27,118	23,393
1986	44,930	37,965	32,161	45,356	38,276	32,583	30,536	27,763	24,033
1988	45,185	39,031	32,618	45,513	39,125	32,908	30,917	27,937	24,700
1990	46,005	38,308	32,669	46,471	38,685	33,091	31,820	27,536	25,888

NOTE: Salaries are for full-time instructional faculty on 9- or 10-month contracts. Data for academic years ending 1988 and 1990 include imputations for nonresponding institutions.

SOURCE: U.S. Department of Education, National Center for Education Statistics, IPEDS/HEGIS surveys of faculty salaries, various years.

Table 57-1 Teaching status of teachers hired in 1987-88, by level and sector

(Percentage distribution)

Teaching status	Public			Private		
	Total	Elementary	Secondary	Total	Elementary	Secondary
First-time teacher	19.8	17.7	22.6	25.2	25.4	25.0
Reentrant to teaching	26.3	26.4	26.2	38.1	38.5	37.6
Transfer from other teaching position	53.9	55.9	51.2	36.7	36.1	37.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: All data in this indicator are based on teacher responses and pertain to teachers who began their current job during the 1987–88 school year. First-time teachers are defined as those who had a total of one year or less of teaching experience and were not teaching the year before their current job. Reentrants are defined as those who reported more than one year of teaching experience and were not teaching the year before their current job. Tabulation excludes those with unknown teaching status (0.1 percent of total).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey.

Table 57-2 Source of teachers hired in 1987–88, who had not been teaching just prior to their current teaching job, by sector, level, and teaching status

(Percentage distribution)

Source	Public			Private		
	Total	Elementary	Secondary	Total	Elementary	Secondary
Total						
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Working in education	15.9	18.2	13.1	10.7	12.5	8.5
Working outside education	19.2	14.8	24.6	26.2	20.5	33.1
Attending college	39.2	38.4	40.2	30.7	28.9	32.9
Homemaking/child rearing	16.0	19.5	11.5	21.2	26.2	15.2
Other	9.7	9.0	10.5	11.2	11.9	10.3
Military service	0.4	0.2	0.6	0.3	0.0	0.6
Retired	0.2	0.1	0.4	3.0	4.2	1.5
Unemployed	1.1	1.2	1.1	0.8	1.0	0.6
Other	8.0	7.5	8.5	7.1	6.7	7.6
First-time teachers						
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Working in education	10.9	13.6	8.1	8.3	10.2	6.0
Working outside education	15.3	10.9	20.0	28.1	20.1	37.7
Attending college	61.8	63.6	59.8	48.2	50.8	45.1
Homemaking/child rearing	4.6	5.4	3.8	9.9	14.4	4.3
Other	7.4	6.6	8.3	5.5	4.4	6.9
Military service	0.5	0.0	1.1	0.3	0.0	0.7
Retired	0.1	0.0	0.2	0.1	0.0	0.2
Unemployed	0.8	1.0	0.6	0.0	0.0	0.0
Other	6.0	5.6	6.4	5.1	4.4	6.0
Reentrants						
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Working in education	19.7	21.3	17.4	12.3	14.0	10.2
Working outside education	22.1	17.5	28.6	24.9	20.7	30.1
Attending college	22.3	21.6	23.3	19.1	14.6	24.7
Homemaking/child rearing	24.5	29.0	18.2	28.7	33.9	22.4
Other	11.4	10.6	12.5	14.9	16.8	12.6
Military service	0.2	0.3	0.2	0.2	0.0	0.5
Retired	0.3	0.2	0.5	4.9	7.0	2.4
Unemployed	1.4	1.3	1.5	1.3	1.6	1.0
Other	9.5	8.9	10.3	8.5	8.3	8.7

NOTE: Source of teachers refers to the main activity the year before the current teaching job. Tabulation excludes first-time and reenteering teachers with unknown source (0.2 percent of total). See note to table 57-1 for definition of first-time teachers and reentrants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987–8 Schools and Staffing Survey.

Table 57-3 Standard errors for estimated percentages in text table for *Indicator 57*

Teaching status and source	Public	Private
Teaching status		
First-time teacher	0.6	1.3
Reentrant to teaching	0.7	1.9
Transfer from other teaching position	0.8	1.7
Source of first-time and reentering teachers		
First-time teachers		
Working in education	1.3	1.6
Working outside education	1.3	3.3
Attending college	2.0	3.1
Homemaking/child rearing	0.8	3.5
Other	1.0	1.2
Reentering teachers		
Working in education	1.3	2.0
Working outside education	1.4	2.5
Attending college	1.3	2.3
Homemaking/child rearing	1.5	2.9
Other	1.1	2.7

Table 57-4 Standard errors for estimated percentages in table 57-1

Teaching status	Public			Private		
	Total	Elementary	Secondary	Total	Elementary	Secondary
First-time teacher	0.6	0.9	1.0	1.3	1.7	2.3
Reentrant to teaching	0.7	1.0	1.1	1.9	2.2	3.0
Transfer from other teaching position	0.8	1.2	1.2	1.7	2.0	2.7

NOTE: Tabulation excludes those with unknown status (0.1 percent of total).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey.

Table 57-5 Standard errors for estimated percentages in table 57-2

Source	Public			Private		
	Total	Elementary	Secondary	Total	Elementary	Secondary
Total teachers						
Working in education	1.0	1.5	1.3	1.4	1.7	1.7
Working outside education	1.0	1.3	1.5	2.0	2.4	3.0
Attending college	1.2	1.8	1.6	1.9	2.5	3.0
Homemaking/child rearing	1.0	1.5	1.1	2.2	3.1	2.8
Other	0.8	1.0	1.1	1.8	2.9	1.8
Military service	0.1	0.1	0.2	0.2	0.0	0.4
Retired	0.1	0.1	0.2	2.0	3.6	0.9
Unemployed	0.3	0.4	0.3	0.2	0.4	0.5
Other	0.7	1.0	0.9	0.9	1.3	1.4
First-time teachers						
Working in education	1.3	1.9	1.2	1.6	2.2	2.1
Working outside education	1.3	1.9	1.8	3.3	3.2	5.1
Attending college	2.0	3.0	2.3	3.1	4.7	4.7
Homemaking/child rearing	0.8	1.2	1.1	3.5	5.7	2.0
Other	1.0	1.5	1.7	1.2	1.1	2.3
Military service	0.2	0.0	0.5	0.3	0.0	0.6
Retired	0.1	0.0	0.2	0.1	0.0	0.2
Unemployed	0.3	0.6	0.3	0.0	0.0	0.0
Other	1.0	1.5	1.3	1.1	1.1	2.1
Reentrants						
Working in education	1.3	1.9	2.1	2.0	2.8	2.6
Working outside education	1.4	1.7	2.2	2.5	3.2	4.1
Attending college	1.3	1.9	2.0	2.3	2.3	4.7
Homemaking/child rearing	1.5	2.2	1.7	2.9	3.9	4.3
Other	1.1	1.6	1.6	2.7	3.1	2.2
Military service	0.1	0.2	0.2	0.2	0	0.4
Retired	0.2	0.2	0.3	3.3	5.8	1.4
Unemployed	0.4	0.5	0.5	0.4	0.7	0.9
Other	1.0	1.4	1.4	1.2	2.1	1.5

NOTE: Source refers to the main activity the year before the current teaching job. Tabulation excludes first-time and reentering teachers with unknown source (0.2 percent of total). See note to table 57-1 fr definition of firtst-time teachers and reentrants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987-88 Schools and Staffing Survey.

Table 58-1 Change in teaching status of full-time public secondary teachers between 1987–88 and 1988–89 school years, by primary assignment field in base year

(Percentage distribution)

Teaching status	Academic: Science/math	Academic: Non-science/math	Vocational	Special groups	Other
Stayers	89.9	89.3	89.5	85.2	86.6
Movers	4.7	5.2	5.0	9.7	10.0
Leavers	5.4	5.6	5.5	5.0	3.4
Total	100.0	100.0	100.0	100.0	100.0

NOTE: The components of the primary assignment field categories are as follows: (1) Academic: Science/math (biology, chemistry, computer science, geology, mathematics, physics, general and other science); (2) Academic: Non-science/math (English and reading, art, foreign languages, music, religion, philosophy, social studies); (3) Special groups (special education, remedial education, bilingual education, English as a second language, education of the gifted); (4) Other fields (physical education, general education, other).

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987–88 Schools and Staffing Survey (teacher questionnaire) and 1988–89 Teacher Followup Survey.

Table 58-2 Standard errors for estimated percentages in text table for *Indicator 58*

Teaching status and destination of leavers	Public		Private	
	Elementary	Secondary	Elementary	Secondary
Teaching status				
Stayers	0.8	0.6	1.5	2.1
Movers	0.7	0.5	1.0	1.3
Leavers	0.4	0.4	1.0	1.5
Destination of leavers				
Working in education	3.3	4.4	2.8	2.9
Working outside education	1.4	3.1	4.2	4.8
Attending college	1.1	1.0	1.4	2.4
Homemaking/childrearing	6.0	4.0	6.6	5.8
Retired	4.8	3.1	1.8	2.8
Disabled	0.3	0.3	0.5	0.3
Other	2.8	1.6	5.8	2.0

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987–88 Schools and Staffing Survey (teacher questionnaire) and 1988–89 Teacher Followup Survey.

Table 58-3 Standard errors for estimated percentages in table 58-1

Teaching status	Academic: Science/math	Academic: Non-science/math	Vocational	Special groups	Other
Stayers	1.2	1.0	1.7	2.6	3.9
Movers	0.8	0.7	1.2	1.8	3.7
Leavers	0.7	0.8	1.1	1.2	0.8

NOTE: See note to table 58-1 for definition of primary assignment field.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 1987–88 Schools and Staffing Survey (Teacher questionnaire) and 1988–89 Teacher Followup Survey.

Table 59-1 Percentage of new doctorate recipients with definite employment plans in the United States who had job commitments at colleges and universities, by field of study: Years of doctorate, 1970–90

Field of study[1]	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
All fields[2]	68.1	69.3	67.7	65.0	62.6	60.4	60.5	58.8	56.9	55.1
Humanities and social/ behavioral sciences	86.4	85.3	83.3	80.7	78.3	75.5	73.8	71.6	69.1	65.7
Humanities	96.1	94.4	94.0	93.3	91.0	89.3	90.0	87.4	85.3	82.3
Social/behavioral sciences	80.3	79.7	76.6	73.2	71.2	68.7	66.0	63.9	61.3	58.2
Natural and computer sciences and engineering	46.6	50.5	48.4	45.5	41.4	39.2	42.8	40.5	38.6	36.8
Natural sciences	56.4	61.1	60.9	57.2	53.2	47.7	51.9	48.7	45.1	41.7
Life sciences	70.9	73.2	68.8	68.4	66.0	61.7	61.7	63.3	61.4	59.3
Physical sciences	38.2	41.9	45.5	38.0	32.3	25.8	31.6	29.8	24.9	22.2
Mathematics	80.3	85.7	78.7	77.6	77.1	74.3	77.8	72.6	71.4	70.8
Computer sciences and engineering	28.6	31.3	27.0	25.3	21.1	24.9	27.0	27.0	27.5	29.1
Computer sciences	—	—	—	—	—	—	—	50.0	60.6	53.2
Engineering	28.6	31.3	27.0	25.3	21.1	24.9	27.0	26.7	25.6	26.6
Technical/professional	71.6	69.0	66.4	63.3	62.2	60.3	59.0	58.7	57.4	57.8
Education	70.9	67.6	63.5	60.2	58.5	56.4	54.7	54.5	52.5	52.6
Other technical/professional	73.9	73.3	75.8	71.8	72.0	70.3	70.8	69.7	68.6	69.8

Field of study[1]	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
All fields[2]	52.6	51.4	50.3	51.7	50.7	50.6	50.3	51.9	51.9	52.7	51.9
Humanities and social/ behavioral sciences	62.7	61.8	61.8	62.5	60.2	61.0	53.4	61.1	61.2	63.2	63.9
Humanities	80.7	82.3	82.7	84.4	81.9	81.9	80.4	84.8	82.7	83.1	84.9
Social/behavioral sciences	54.6	52.8	52.5	52.5	50.2	51.1	48.9	49.2	50.9	53.2	52.8
Natural and computer sciences and engineering	35.2	34.2	33.3	38.0	36.9	36.9	35.9	37.6	38.4	37.9	34.1
Natural sciences	39.4	36.4	36.1	38.9	38.8	39.6	36.6	37.7	40.0	39.6	37.5
Life sciences	53.8	55.0	50.3	49.9	45.1	50.3	45.8	44.7	49.8	49.2	47.1
Physical sciences	20.1	16.8	19.2	23.1	22.5	23.4	20.6	24.4	23.3	21.6	20.8
Mathematics	72.1	70.3	74.6	77.2	79.4	76.4	76.5	75.4	81.5	82.5	81.1
Computer sciences and engineering	28.4	30.6	28.6	36.7	34.1	33.2	35.0	37.5	36.9	36.3	31.0
Computer sciences	47.4	52.7	50.4	53.6	50.3	54.2	51.3	68.5	58.9	64.9	57.1
Engineering	26.5	28.0	26.2	34.4	31.7	30.6	32.6	32.1	32.8	30.6	26.0
Technical/professional	55.2	53.4	52.1	51.7	51.9	51.4	52.8	53.6	53.4	55.0	54.5
Education	50.0	48.2	45.9	45.0	43.9	42.8	45.0	45.0	44.4	46.0	46.8
Other technical/professional	68.2	65.8	65.6	66.3	68.6	68.3	68.5	69.6	69.4	70.2	68.9

—Data not collected as a separate field of study.

[1] Data differ slightly from previously published figures.

[2] Includes those for whom field of study is unknown.

NOTE: Only new doctorate recipients with definite employment commitments in the United States are reported here. A 'definite commitment' is defined as a signed contract, acceptance of a formal offer, etc. See Glossary for definition of technical/professional fields.

SOURCE: National Research Council, Doctorate Records File, Survey of Earned Doctorates, various years, unpublished tabulations.

Table 59-2 Number of new doctorate recipients with definite employment plans in the United States who had job commitments at colleges and universities, by field of study: Years of doctorate, 1970–90

Field of study[1]	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
All fields[2]	11,537	12,306	11,917	11,626	10,414	10,135	9,761	8,896	8,260	8,133
Humanities and social/behavioral sciences	5,071	5,468	5,441	5,349	4,721	4,524	4,193	3,756	3,427	3,237
Humanities	2,169	2,299	2,350	2,315	1,962	1,764	1,655	1,498	1,380	1,262
Social and behavioral sciences	2,902	3,169	3,091	3,034	2,759	2,760	2,538	2,258	2,047	1,975
Natural and computer sciences and engineering	2,711	2,721	2,346	2,162	1,792	1,638	1,611	1,471	1,350	1,394
Natural sciences	2,126	2,125	1,861	1,721	1,458	1,249	1,240	1,105	998	968
Life science	786	800	691	733	616	496	497	431	402	407
Physical science	723	686	607	495	398	317	336	334	277	273
Mathematics	617	639	563	493	444	436	407	340	319	288
Computer sciences and engineering	585	596	485	441	334	389	371	366	352	426
Computer sciences	—	—	—	—	—	—	—	—	43	74
Engineering	585	596	485	441	334	389	371	358	309	352
Technical/professional	3,731	4,099	4,125	4,105	3,888	3,967	3,936	3,663	3,474	3,493
Education	2,786	2,998	3,000	2,860	2,644	2,686	2,681	2,462	2,211	2,237
Other technical/professional	945	1,101	1,125	1,245	1,244	1,281	1,255	1,201	1,263	1,256

Field of study[1]	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
All fields[2]	7,911	7,725	7,278	7,189	6,770	6,792	6,746	6,731	6,986	7,328	7,547
Humanities and socialbehavioral sciences	3,056	3,084	2,836	2,808	2,548	2,567	2,479	2,529	2,629	2,718	2,969
Humanities	1,225	1,262	1,178	1,186	1,091	1,114	1,030	1,176	1,153	1,194	1,363
Social and behavioral sciences	1,831	1,822	1,658	1,622	1,457	1,453	1,449	1,353	1,476	1,524	1,606
Natural and computer sciences and engineering	1,326	1,297	1,249	1,328	1,263	1,307	1,234	1,251	1,399	1,476	1,366
Natural sciences	911	857	847	815	785	815	700	658	718	766	716
Life science	363	364	324	290	255	299	244	219	255	280	246
Physical science	245	218	259	274	248	267	221	243	234	227	226
Mathematics	303	275	264	251	282	249	235	196	229	259	244
Computer sciences and engineering	415	440	402	513	478	492	534	593	681	710	650
Computer sciences	63	79	68	90	91	90	101	161	168	211	192
Engineering	352	361	334	423	387	402	433	432	513	499	458
Technical/professional	3,525	3,330	3,183	3,048	2,954	2,909	3,022	2,932	2,944	3,117	3,194
Education	2,264	2,115	1,928	1,813	1,693	1,608	1,717	1,598	1,568	1,643	1,787
Other technical/professional	1,261	1,215	1,255	1,235	1,261	1,301	1,305	1,334	1,376	1,474	1,407

—Data not collected as a separate field of study.

[1] Data differ slightly from previously published figures.
[2] Includes those for whom field of study was unknown.

NOTE: Only new doctorate recipients with definite employment commitments in the United States are reported here. A 'definite commitment' is defined as a signed contract, acceptance of a formal offer, etc. See Glossary for definition of technical/professional fields.

SOURCE: National Research Council, Doctorate Records File, Survey of Earned Doctorates, various years, unpublished tabulations.

Table 59-3 Postgraduate plans of new doctorate recipients: Year of doctorate, 1970–1990

Year of doctorate	Total number of doctorates[1]	With postgraduate plans				
		Total with plans[2]	With plans in the United States		Outside United States	Location unknown
			Postdoctoral	Employment		
1970	29,498	22,596	2,934	16,931	1,864	810
1971	31,867	23,867	3,119	17,759	2,176	687
1972	33,041	23,902	3,272	17,605	2,317	521
1973	33,755	24,091	3,335	17,881	2,182	573
1974	33,047	22,283	2,920	16,624	2,103	529
1975	32,951	22,924	3,344	16,767	2,077	558
1976	32,946	22,503	3,497	16,147	2,059	618
1977	31,716	21,345	3,438	15,128	1,913	716
1978	30,875	20,849	3,623	14,510	1,808	805
1979	31,237	21,411	3,711	14,770	1,927	865
1980	31,020	21,919	3,824	15,035	1,867	1,132
1981	31,353	21,888	3,700	15,036	1,981	1,122
1982	31,096	21,422	3,688	14,457	2,041	1,206
1983	31,216	21,163	3,797	13,873	2,086	1,380
1984	31,277	20,757	3,958	13,346	1,966	1,451
1985	31,297	20,953	4,005	13,420	2,089	1,389
1986	31,895	21,297	4,304	13,416	2,113	1,400
1987	32,364	21,360	4,629	12,960	2,087	1,608
1988	33,490	22,202	4,979	13,472	2,107	1,547
1989	34,319	22,811	4,984	13,893	2,188	1,687
1990	36,027	23,299	5,040	14,539	2,645	1,007

[1] Due to differences in survey design, the total number of doctorates reported by the Survey of Earned Doctorates differs from that obtained from the U.S Department of Education's IPEDS/HEGIS surveys of degrees conferred.

[2] Includes those with unknown type of plans in the United States.

NOTE: Doctorates with postgraduate plans are those who have definite commitments for employment or study. A 'definite commitment' is defined as a signed contract, acceptance of a formal offer, etc. Data for 1985-88 revised from previously published figures. Those with unknown type of plans are not shown.

SOURCE: National Science Foundation, Science and Engineering Doctorates: 1960-90, table 15, and earlier editions (based on the Survey of Earned Doctorates, Doctorate Records File).

Table 60-1 Percentage of doctoral holders aged 55 or older, by type of employer and field: Selected years, 1977–1989

Type of employer and field	1977	1979	1981	1983	1985	1987	1989
4-year college/university							
Humanities	19.5	20.0	21.5	23.2	24.5	25.7	27.2
Social and behavioral sciences	16.5	18.0	20.1	21.9	22.1	21.8	23.6
Natural/computer sciences and engineering	14.1	15.8	17.6	19.1	20.2	21.4	22.3
Natural sciences	14.2	16.0	17.3	19.0	20.1	21.1	22.3
Life sciences	15.4	16.2	17.4	19.3	19.5	19.9	20.7
Physical sciences	13.8	16.6	18.5	19.8	22.0	24.0	26.0
Mathematics	10.8	13.3	13.7	15.9	17.9	19.0	20.7
Computer sciences and engineering	13.2	14.9	19.0	19.1	20.5	22.6	22.3
Computer sciences	5.8	9.1	12.7	14.0	12.3	12.6	12.7
Engineering	14.2	15.7	20.0	20.1	22.5	24.9	24.8
Other employers							
Humanities	17.8	16.0	15.0	12.8	14.8	15.6	18.0
Social and behavioral sciences	16.8	15.8	17.4	17.1	18.3	17.6	18.2
Natural/computer sciences and engineering	13.2	14.7	15.3	15.6	16.1	15.4	16.7
Natural sciences	14.9	16.7	17.4	17.4	18.1	16.5	17.1
Life sciences	15.8	17.0	17.2	17.1	17.1	15.9	15.6
Physical sciences	14.7	16.4	17.9	18.0	19.0	17.2	18.8
Mathematics	9.3	17.6	13.6	14.0	15.9	14.1	11.7
Computer sciences and engineering	9.8	10.8	11.4	12.3	12.7	13.6	16.2
Computer sciences	5.3	4.7	6.0	7.1	6.5	9.2	11.1
Engineering	10.3	11.6	12.3	13.3	14.1	14.8	17.5

NOTE: For the humanities, field is defined by field of doctorate. For the sciences and engineering, field is defined by field of employment if employment is in the sciences or engineering; otherwise, it is defined by field of doctorate.

SOURCE: National Research Council, Survey of Doctorate Recipients, unpublished tabulations, various years.

Table 60-2 Standard errors for estimated percentages in table 60-1

Type of employer and field	1977	1979	1981	1983	1985	1987	1989
4-year college/university							
Humanities	0.5	0.6	0.6	0.6	0.7	0.8	0.8
Social and behavioral sciences	0.5	0.7	0.7	0.7	0.8	0.8	0.8
Natural/computer sciences and engineering	0.3	0.4	0.4	0.3	0.5	0.5	0.5
Natural sciences	0.3	0.4	0.4	0.4	0.5	0.5	0.5
Life sciences	0.5	0.5	0.5	0.5	0.6	0.6	0.6
Physical sciences	0.5	0.7	0.7	0.7	0.9	1.0	1.0
Mathematics	0.8	0.9	0.9	0.9	1.3	1.3	1.3
Computer sciences and engineering	0.7	1.2	1.1	1.0	1.3	1.3	1.2
Computer sciences	1.4	1.7	1.5	1.2	2.1	2.0	1.7
Engineering	0.8	1.5	1.5	1.4	1.6	1.5	1.4
Other employers							
Humanities	1.1	1.1	0.9	0.8	1.0	1.1	1.1
Social and behavioral sciences	0.6	0.8	0.7	0.7	0.8	0.8	0.8
Natural/computer sciences and engineering	0.3	0.4	0.3	0.3	0.4	0.4	0.4
Natural sciences	0.4	0.4	0.4	0.4	0.5	0.5	0.5
Life sciences	0.6	0.7	0.6	0.6	0.7	0.7	0.6
Physical sciences	0.5	0.6	0.6	0.6	0.7	0.7	0.7
Mathematics	1.6	2.0	1.8	1.7	2.2	2.1	1.9
Computer sciences and engineering	0.5	0.8	0.6	0.6	0.8	0.7	0.7
Computer sciences	1.0	1.0	0.7	0.6	1.1	1.1	1.1
Engineering	0.5	1.0	0.8	0.8	0.9	0.9	0.9

NOTE: For the humanities, field is defined by field of doctorate. For the sciences and engineering, field is defined by field of employment if employment is in the sciences or engineering; otherwise, it is defined by field of doctorate.

SOURCE: National Research Council, Survey of Doctorate Recipients, unpublished tabulations, various years.

Note on the calculation of standard errors for the age of doctorate recipients employed in 4-year colleges and universities

This note concerns the calculation of standard errors for data obtained from the Survey of Doctorate Recipients (SDR) conducted by the National Research Council (NRC). The calculations were based on information contained in the NRC reports referenced at the end of this note.

For the years 1985-1989, NRC constructed generalized variance functions (GVFs) for estimating standard errors. The GVF for a total X (e.g., the number of chemists) expresses the relative variance of X as a function of X:

$$\mathrm{relvar}(X)=a+b/X$$

where $\mathrm{relvar}(X) = (\mathrm{variance}\ X)/X^2$. The a and b parameters for different subcategories of individuals are given in the methodological report for the appropriate year (see Sources below). For proportions Y/X where X and Y are counts and Y is a subset of X,

$$\mathrm{relvar}(Y/X)=b(1/Y-1/X).$$

Because some of the categories of field of study presented in this indicator are combinations of categories presented in the NRC reports, estimates of the parameters for the combined groups were derived from the parameters of the individual groups. Formulas for a and b for combined groups are as follows. If the totals in the individual categories to be combined are Y_1, Y_2,..., Y_C (numerators) and X_1, X_2,..., X_C (denominators) and the totals for the combined groups are Y_T and X_T, then the a and b parameters for the combined groups are

$$a_T=\sum_{i=1}^{T}\left(\frac{x_i}{x_T}\right)^2 a_i$$

$$b_T=\sum_{i=1}^{T}\left(\frac{x_i}{x_T}\right)b_i$$

assuming $\mathrm{cov}(X_i, X_j)$ and $\mathrm{cov}(Y_i, Y_j)$ are negligible.

For earlier years (1977-1983), generalized variance functions were not constructed. The NRC reports for these years recommend the use of standard errors based on simple random samples

$$se(p)=\sqrt{\frac{p(1-p)}{n}}$$

Comparisons of standard errors based on simple random samples and stratified random samples for selected statistics in the NRC reports showed, for the most part, small differences between the two. Thus, standard errors presented in this indicator for 1977-1983 are based on simple random sample formulae.

SOURCES:

National Research Council, *Science, Engineering, and Humanities Doctorates in the United States: 1977 Profile* (and *Profiles* for 1979, 1981, and 1983).

National Research Council, *Methodological Report for the 1985 Survey of Doctorate Recipients*, April 1987 (and *Methodological Report* for 1987 and 1989).

Sources of Data

General Information

The information presented in this report was obtained from many sources, including federal and state agencies, private research organizations, and professional associations. The data were collected using many research methods including surveys of a universe (such as all school districts) or of a sample, compilations of administrative records, and statistical projections. Users of *The Condition of Education* should take particular care when comparing data from different sources. Differences in procedures, timing, phrasing of questions, interviewer training, and so forth mean that the results are not strictly comparable. Following the general discussion of data accuracy below, descriptions of the information sources and data collection methods are presented, grouped by sponsoring organization. More extensive documentation of one survey's procedures than of another's does not imply more problems with the data, only that more information is available.

Unless otherwise noted, all comparisons cited in the text were tested for significance using t-tests and are significant at the .05 level. However, when multiple comparisons are cited, a Bonferronni adjustment to the significance level was made. When other tests were used, they are described in the supplemental note for the indicator.

The accuracy of any statistic is determined by the joint effects of "sampling" and "nonsampling" errors. Estimates based on a sample will differ somewhat from the figures that would have been obtained if a complete census had been taken using the same survey instruments, instructions, and procedures. In addition to such sampling errors, all surveys, both universe and sample, are subject to design, reporting, and processing errors and errors due to nonresponse. To the extent possible, these nonsampling errors are kept to a minimum by methods built into the survey procedures. In general, however, the effects of nonsampling errors are more difficult to gauge than those produced by sampling variability.

The estimated standard error of a statistic is a measure of the variation due to sampling and can be used to examine the precision obtained in a particular sample. The sample estimate and an estimate of its standard error permit the construction of interval estimates with prescribed confidence that the interval includes the average result of all possible samples. If all possible samples were selected, each of these surveyed under essentially the same conditions, and an estimate and its standard error were calculated from each sample, then approximately 90 percent of the intervals from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate would include the average value from all possible samples; 95 percent of the intervals from two standard errors below the estimate to two standard errors above the estimate would include the average value of all possible samples; and 99 percent of all intervals from 2.5 standard errors below the estimate to 2.5 standard errors above the estimate would include the average value of all possible samples. These intervals are called 90 percent, 95 percent, and 99 percent confidence intervals, respectively.

To illustrate this further, consider the text table for indicator 3 and table 3-3 for estimates of standard errors from Census Current Population Surveys. For the 1988 estimate of the percentage of total males 8 years old who were 1 or more years below modal grade (28.0 percent), supplemental table 3-3 shows a standard error of 1.0. Therefore, we can construct a 95 percent confidence interval from 30.0 to 26.0 (28.0 ± 2 x 1.0). If this procedure were followed for every possible sample, about 95 percent of the intervals would include the average for all possible samples.

Standard errors can help assess how valid a comparison between two estimates might be. The standard error of a difference between two sample estimates is approximately equal to the square root of the sum of the squared standard errors of the estimates. The standard error (se) of the difference between sample estimate "a" and sample estimate "b" (if "a" and "b" are approximately independent) is:

$$se_{a-b}=\sqrt{se_a^2+se_b^2}$$

It should be noted that most of the standard errors presented in the indicators and in the original documents are approximations. That is, to derive estimates of standard errors that would be applicable to a wide variety of items and that could be prepared at a moderate cost, a number of approximations were required. As a result, most of the standard errors presented provide a general order of magnitude rather than the exact standard error for any specific item.

The preceding discussion on sampling variability was directed toward a situation concerning one or two estimates. Determining the accuracy of statistical projections is more difficult. In general, the further away the projection date is from the date of the actual data being used for the projection, the greater the possible error in the projection. If, for instance, annual data from 1970 to 1988 are being used to project enrollment in elementary and secondary education, the further beyond 1988 one projects, the more variability in the projection. One will be less sure of the 1994 enrollment projection than of the 1992 projection. A detailed discussion of the projections methodology is contained in *Projections of Education Statistics to 2001* (National Center for Education Statistics, 1990).

Both universe and sample surveys are subject to nonsampling errors. Nonsampling errors can arise in various ways: from respondents or interviewers interpreting questions differently, from respondents estimating the values that they provide, from partial to total nonresponse, from imputation or reweighting to adjust for nonresponse, from inability or unwillingness on the part of respondents to provide correct information, from recording and keying errors, or from overcoverage or undercoverage of the target universe.

Sampling and nonsampling error combine to yield total survey error. Since estimating the magnitude of nonsampling errors would require special experiments or access to independent data, these magnitudes are seldom available. In almost all situations, the sampling error represents an underestimate of the total survey error, and thus an overestimate of the precision of the survey estimates.

To compensate for suspected nonrandom errors, adjustments of the sample estimates are often made. For example, adjustments are frequently made for nonresponse, both total and partial. An adjustment made for either type of nonresponse is often referred to as an imputation—substitution of the "average" questionnaire response for the nonresponse. Imputations are usually made separately within various groups of sample members which have similar survey characteristics. Imputation for item nonresponse is usually made by substituting for a missing item the response to that item of a respondent having characteristics that are similar to those of the nonrespondent.

In previous editions of *The Condition of Education*, when reporting race-specific data from the Current Population Survey, Hispanics were usually included among whites and blacks (i.e., "Hispanics may be of any race."). Beginning with this edition, race/ethnic data from the Current Population Survey excludes Hispanics from whites and blacks (e.g., whites are non-Hispanic whites and blacks are non-Hispanic blacks). One exception is *Indicator 39*, Children in poverty, which includes Hispanics among whites and blacks.

1. Federal Agency Sources

Bureau of the Census
U.S. Department of Commerce

Current Population Survey

Current estimates of school enrollment and social and economic characteristics of students are based on data collected in the Census Bureau's monthly household survey of about 60,000 households, the Current Population Survey (CPS). The CPS covers 729 sample areas consisting of 1,973 counties, independent cities, and minor civil divisions throughout the 50 states and the District of Columbia. The current sample was selected from 1980 census files and is periodically updated to reflect new housing construction.

The primary function of the monthly CPS is to collect data on labor force participation of the civilian noninstitutional population. (It excludes military personnel and inmates of institutions.) In October of each year, questions on school enrollment by grade and other school characteristics are asked about each member of the household.

The estimation procedure employed for the monthly CPS data involves inflating weighted sample results to independent estimates for the total civilian noninstitutional population by age, sex, race, and Hispanic origin. These independent estimates are derived from statistics from decennial censuses of the population: statistics on births, deaths, and immigration and emigration; and statistics on the strength of the Armed Forces. Generalized standard error tables are provided in the *Current Population Reports*. The data are subject to both nonsampling and sampling errors.

Further information is available in the *Current Population Reports*, Series P-20, or by contacting:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

School Enrollment. Each October, the Current Population Survey (CPS) includes supplemental questions on the enrollment status of the population aged 3 years old and over. Annual reports documenting school enrollment of the population have been produced by the Bureau of the Census since 1946. The latest report is *Current Population Reports*, Series P-20, No. 452, *School Enrollment—Social and Economic Characteristics of Students: October 1989*. All sample surveys are subject to sampling and nonsampling error. The main sources of nonsampling error in the supplement are those inherent in any household survey. When a household respondent reports for all individuals in the household, is that person knowledgeable about the grade or level of school, type of school, or full-time status? In addition, some analysts believe social acceptability of response causes biased reporting, such as reluctance to report lack of a high school diploma; some dismiss it. Household-reported data may not be consistent with administrative data because definitions may not be the same. An additional source of variation in statistics reported may be a change in the survey universe over time. For example, a significantly larger proportion of young men were members of the Armed Forces in the late 1960s and early 1970s than before or after and, therefore, were not in the CPS universe. That caused a short-term increase in the enrollment *rate* of young men, which was greater than the increase in numbers of enrollees would indicate. Other events may similarly affect survey data. The user must be mindful of external events as well as the character of the population being measured when describing survey trends.

An advantage of household survey data over administrative data is the availability of demographic, social, and economic data for the student and family not available in administrative data. Beginning with data for October 1981, tabulations have been controlled to the 1980 census. Estimates for earlier years were controlled to earlier censuses.

Questions concerning the CPS school enrollment data may be directed to:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Educational Attainment. Data on years of school completed are derived from two questions on the CPS instrument. Biennial reports documenting educational attainment are produced by the Bureau of the Census using March CPS data. The latest report is *Current Population Reports*, Series P-20, No. 451 "Educational Attainment in the United States, March 1989 and 1988."

The usual constraints on use of household survey data apply. Reliability of response may depend on whether a proxy respondent was used, the recency and importance of the event, and the number and clarity of response categories. There is some evidence that years of school completed in the CPS may not measure completion of degrees as clearly as they once did. The number of persons who have completed 4 years of college has been increasing more rapidly than the number of bachelor's degrees added each year would suggest. While the number of years completed is not deteriorating in quality (that is, respondents are not exaggerating the number of years), more students than in the past are taking more than 4 academic years to complete a bachelor's degree. Also, although interviewers are instructed to count receiving a high school diploma by means of passing a GED exam as completion of the 12th grade, as the number of persons who have received a diploma in this way has increased the number counted appropriately may not have kept pace. The 1990 Census of Population will contain a question on highest degree received rather than relying solely on a years of school completed item.

Beginning with the data for March 1980, tabulations have been controlled to the 1980 census. Estimates for earlier years were controlled to earlier censuses.

Questions concerning the CPS educational attainment data may be directed to:

Education and Social Stratification Branch
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Voting and Registration. In November of election years, the CPS includes supplemental questions on voting and registration within the civilian noninstitutional population. CPS voting estimates exceed counts of the actual number of votes cast. On balance, the CPS overstates voting in Presidential elections by 10 to 20 percent of the total number of persons reported as having voted. Some of the possible reasons for the discrepancies are: (a) Understatement of actual number of votes cast; (b) possible reluctance of some CPS respondents to admit to not voting; (c) nonresponse to the CPS survey; (d) CPS undercoverage of certain groups in the population in which nonvoting may be high; (e) use of a single household respondent to report on the voting and registration of all persons in the household. These reasons are discussed in greater detail in *Current Population Reports*, Series P-20, No. 453, "Voting and Registration in the Election of November 1990," pp. 9-11.

Data on voter participation by social and economic characteristics of the population of voting age have been published since 1964 in *Current Population Reports*, Series P-20. The latest report is "Voting and Registration in the Election of November 1990," No. 453.

For additional information about this survey, contact:

Jerry T. Jennings
Population Division
Bureau of the Census
U.S. Department of Commerce
Washington, DC 20233

Bureau of Labor Statistics
U.S. Department of Labor

Educational Attainment of Workers

These data are collected by the March supplement to the Current Population Survey (CPS) sponsored by the Bureau of Labor

Statistics and conducted by the Bureau of the Census. Sampling and nonsampling errors associated with the CPS are discussed under that heading. For further information on employment and unemployment statistics contact:

Division of Labor Force Statistics
Bureau of Labor Statistics
441 G Street NW (Room 2486)
Washington, DC 20212

Equal Employment Opportunity Commission

Higher Education Staff Information Survey (EE0-6)

The United States Equal Employment Opportunity Commission (EEOC) requires all public and private institutions of higher education with at least 15 full-time employees to file the Higher Education Staff Information (EEO-6) report biennially. Higher education institutions are those accredited at the college level by an agency recognized by the Secretary, U.S. Department of Education.

The EEO-6 collects information on: (1) the number of full-time and part-time employees, by occupation, race/ethnicity and sex; (2) the number of full-time faculty, by academic rank, tenure status, race/ethnicity, and sex; and (3) the salaries of full-time staff, by occupation, race/ethnicity, and sex.

Beginning in 1987, data from the EEO-6 have been combined with data collected by the National Center for Education Statistics (NCES) to create the Fall Staff in Postsecondary Institutions survey. The Fall Staff survey is discussed under surveys conducted by NCES.

For additional information on the EEO-6 survey, contact:

Betty Wright
U.S. Equal Employment Opportunity
Commission
1801 L Street, NW
Washington, DC 20507

National Center for Education Statistics
U.S. Department of Education

Common Core of Data

The National Center for Education Statistics (NCES) uses the Common Core of Data (CCD) survey to acquire and maintain statistical data on the 50 states, the District of Columbia, and the outlying areas from the universe of state-level education agencies. Information about staff and students is collected annually at the school, LEA (local education agency or school district) and state levels. Information about revenues and expenditures is also collected at the state level. Data are collected for a particular school year (July 1 through June 30) via survey instruments sent to the states by October 15 of the subsequent school year. States have 2 years in which to modify the data originally submitted.

Since the CCD is a universe survey, the CCD information presented in this edition of *The Condition of Education* is not subject to sampling error. However, nonsampling error could come from two sources—nonreturn and inaccurate reporting. Almost all of the states submit the six CCD survey instruments each year, but there are many delays in submitting data and the submissions are sometimes incomplete.

Understandably, when 57 education agencies compile and submit data for over 85,000 public schools and approximately 15,800 local school districts, misreporting can occur. Typically, this results from varying interpretation of NCES definitions and differing recordkeeping systems. NCES attempts to minimize these errors by working closely with the Council of Chief State School Officers (CCSSO) and its Committee on Evaluation and Information Systems (CEIS). The state education agencies report data to NCES from data collected and edited in the states' regular reporting cycles. NCES encourages the agencies to incorporate into their own survey systems the NCES items they do not already collect so that those items will also be available for the subsequent CCD survey. Over time this has meant fewer missing data cells in each state's response, reducing the need to impute data.

NCES subjects data from the education agencies to a comprehensive edit. Where data are determined to be inconsistent, missing, or out of range, NCES contacts the education agencies for verification. NCES-prepared state summary forms are returned to the state education agencies for verification. States are also given an opportunity to revise their state-level aggregates from the previous survey cycle.

Questions concerning the Common Core of Data can be directed to:

John Sietsema
Elementary and Secondary Education
Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5651

Federal Funds for Education

NCES prepares an annual compilation of Federal funds for education. Data for U.S. Department of Education program totals came from the *Budget of the U.S. Government*. Budget offices of other federal agencies provided information for all other federal program support except for research funds, which are obligations reported by the National Science Foundation in *Federal Funds for Research and Development*, fiscal years 1965 to 1990. Some data are estimated, based on reports from the federal agencies contacted and the *Budget of the U.S. Government, Fiscal Year 1992*.

Except for money spent on research, outlays were used to report program funds to the extent possible. Some tables are obligations as noted in the title of the table. Some federal program funds not commonly recognized as education assistance are also included in the totals reported. For example, portions of federal funds paid to some states and counties as shared revenues resulting from the sale of timber and minerals from public lands have been estimated as funds used for education purposes. Parts of the funds received by states (in 1980) and localities (throughout the period) under the General Revenue Sharing Program are also included, as are portions of federal funds received by the District of Columbia. The share of these funds allocated to education was assumed equal to the share of general funds expended for elementary and secondary education by states and localities in the same year as reported by the U.S. Bureau of the Census in its annual publication, *Governmental Finances*.

All state intergovernmental expenditures for education were assumed earmarked for elementary/secondary education. Contributions of parent governments of dependent school systems to their public schools amounted to approximately 9 percent of local government revenues and local government revenue sharing in each year. Therefore, 9 percent of local government revenue-sharing funds were assumed allocated each fiscal year to elementary and secondary education. Parent government contributions to public school systems were obtained from the U.S. Bureau of the Census, Finances of Public School Systems. The amount of state revenue-sharing funds allocated for postsecondary education in 1980 was assumed to be 13 percent, the proportion of direct state expenditures for institutions of higher education reported in *Governmental Finances* for that year.

The share of federal funds for the District of Columbia assigned to education was assumed equal to the share of the city's general fund expenditures for each level of education.

For the job training programs conducted by the Department of Labor, only estimated sums spent on classroom training have been reported as educational program support.

During the 1970s, The Office of Management and Budget (OMB) prepared annual reports on federal education program support. These were published in *Budget of the United States Government [Special Analyses]*. The information presented in this report is not, however, a continuation of the OMB series. A number of differences in the two series should be noted. OMB required all federal agencies to report outlays for education-related programs using a standardized form, thereby assuring agency compliance in reporting. The scope of education programs reported here differs from OMB. Off-budget items such as the annual volume of guaranteed student loans were not included in

OMB's reports. Finally, while some mention is made of an annual estimate of federal tax expenditures, OMB did not include them in its annual analysis of federal education support. Estimated federal tax expenditures for education are the difference between current federal tax receipts and what these receipts would be without existing education deductions to income allowed by federal tax provisions.

Recipients' data are estimated based on *Estimating Federal Funds for Education: A New Approach Applied to Fiscal Year 1980*, U.S. Department of Education, "Federal Support for Education, Fiscal Years 1980 to 1984," and *Catalog of Federal Domestic Assistance*. The recipients' data are estimated and tend to undercount institutions of higher education (IHEs), students, and local education agencies (LEAs). This is because some of the federal programs have more than one recipient receiving funds. In these cases the recipients were put into a "mixed recipients" category, because there was no way to disaggregate the amount each recipient received.

Questions concerning "Federal Support for Education" can be directed to:

Charlene Hoffman
Data Development Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5650

High School and Beyond

High School and Beyond (HS&B) is a national longitudinal survey of 1980 high school sophomores and seniors. The base-year survey was a probability sample of 1,015 high schools with a target number of 36 sophomores and 36 seniors in each of the schools. A total of 58,270 students participated in the base-year survey. Substitutions were made for noncooperating schools—but not for students—in those strata where it was possible. Overall, 1,122 schools were selected in the original sample and 811 of these schools participated in the survey. An additional 204 schools were drawn in a replacement sample. Student refusals and student absences resulted in an 82 percent completion rate for the survey.

Several small groups in the population were oversampled to allow for special study of certain types of schools and students. Students completed questionnaires and took a battery of cognitive tests. In addition, a sample of parents of sophomores and seniors (about 3,600 for each cohort) was surveyed.

HS&B first followup activities took place in the spring of 1982. The sample design of the first followup survey called for the selection of approximately 30,000 people who were sophomores in 1980. The completion rate for sophomores eligible for on-campus survey administration was about 96 percent. About 89 percent of the students who left school between the base year and first followup surveys (dropouts, transfer students, and early graduates) completed the first followup sophomore questionnaire.

As part of the first followup survey of High School and Beyond, transcripts were requested in fall 1982 for an 18,152-member subsample of the sophomore cohort. Of the 15,941 transcripts actually obtained, 1,969 were excluded because the students had dropped out of school before graduation, 799 were excluded because they were incomplete, and 1,057 were excluded because the student graduated before 1982 or the transcript indicated neither a dropout status nor graduation. Thus 12,116 transcripts were used for the overall curriculum analysis presented in this publication. All courses in each transcript were assigned a six-digit code based on *A Classification of Secondary School Courses* (developed by Evaluation Technologies, under contract with NCES). Credits earned in each course were expressed in Carnegie units. (The Carnegie unit is a standard of measurement that represents 1 credit for the completion of a 1-year course. To receive credit for a course, the student must have received a passing grade—"pass," "D," or higher.)
Students who transferred from public to private schools or from private to public schools between their sophomore and senior years were eliminated from public/private analyses.

In designing the senior cohort first followup survey, one of the goals was to reduce the size of the retained sample, while still keeping sufficient numbers of minorities to allow important policy analyses. A total of 11,227 (94 percent) of the 11,995 persons subsampled completed the questionnaire. Information was obtained about the respondents' school and employment experiences, family status, and attitudes and plans.

The sample for the second followup, which took place in spring 1984, consisted of about 12,000 members of the senior cohort and about 15,000 members of the sophomore cohort. The completion rate for the senior cohort was 91 percent, and the completion rate for the sophomore cohort was 92 percent.

HS&B third followup data collection activities were performed in spring 1986. Both the sophomore and senior cohort samples for this round of data collection were the same as those used for the second followup survey. The completion rates for the sophomore and senior cohort samples were 91 percent and 88 percent, respectively.

Further information on the High School and Beyond survey may be obtained from:

Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

1987 High School Transcript Study

Transcripts of 1987 high school graduates were compared with transcripts of 1982 graduates to describe changes in course taking across this 5-year period. The analyses were based on approximately 22,700 transcripts of 1987 graduates obtained as part of the 1987 High School Transcript Study and 12,000 transcripts of 1982 graduates who participated in the High School and Beyond (HS&B) project. A brief description of each study is provided below.

The sample of schools for the 1987 High School Transcript Study (conducted by Westat, Inc., for the U.S. Department of Education, National Center for Education Statistics) consisted of a nationally representative sample of 471 eligible secondary schools selected for 1986 NAEP for grade 11/age 17 students, of which 433 schools participated.

These analyses focused on high school graduates, so only those students who had graduated from high school were included—from the 1987 High School Transcript Study as well as from High School and Beyond. Transcript Study graduates were restricted to those who were in grade 11 in 1985–86. Further, because the methods of identifying and defining handicapped students were different in the two studies, and in order to make the two samples as comparable as possible, it was necessary to restrict the samples to those students whose records indicated they had not participated in a special education program.

In 1982, high school transcripts were collected for members of the HS&B study's sophomore cohort who were selected to be in the second follow up survey (about 12,000 transcripts). As in the 1987 High School Transcript Study, records were obtained from all types of high schools, public and private. Information from the transcripts, including specific courses taken, and grades and credits earned, were coded according to the CSSC coding system and were processed into a system of data files designed to be merged with HS&B questionnaire and test data files. Unlike the 1987 High School Transcript Study, some information was not coded, such as the identification of courses as remedial, regular, or advanced, as offered in a different location, or as designed for handicapped students. The data in both sets are subject to sampling and coding (nonsampling) errors.

Further information on this survey may be obtained from:

Andrew Kolstad
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

Higher Education General Information Survey

The Higher Education General Information Survey (HEGIS) was a coordinated effort administered by NCES which acquired and maintained statistical data on the characteristics and operations of institutions of higher education. Implemented in 1966, HEGIS was an annual universe survey of institutions listed in the latest NCES *Education Directory, Colleges and Universities.* It has since been replaced by the Integrated Postsecondary Education Data System (see above).

The information presented in this report drew on HEGIS surveys which solicited information concerning institutional characteristics, faculty salaries, finances, enrollment, and degrees. Since these surveys were distributed to all higher education institutions, the data presented were not subject to sampling error. However, they were subject to nonsampling error, the sources of which varied with the survey instrument. Each survey is therefore discussed separately. Information concerning the nonsampling error of the enrollment and degrees surveys draws extensively on the "HEGIS Post-Survey Validation Study" conducted in 1979.

Further information on HEGIS/IPEDS may be obtained from:

William Freund
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

Earned Degrees Conferred. This survey was part of the HEGIS series throughout its existence. However, the degree classification taxonomy was revised in 1970-71 and 1982-83. Though information from survey years 1970-71 through 1981-82 is directly comparable, care must be taken if information before or after that period is included in any comparison. Degrees-conferred trend tables arranged by the 1982-83 classification were added to the *Condition* to provide consistent data from 1970-71 to 1983-84. Data in this edition on associate's and other formal awards below the baccalaureate, by field of study, are not comparable with figures for earlier years. The nonresponse did not appear to be a significant source of nonsampling error for this survey. The return rate over the years was extremely high, with the response rate for the 1983-84 survey at 95 percent. Because of the high return rate, nonsampling error caused by imputation was also minimal.

The major sources of nonsampling error for this survey were differences between the HEGIS program taxonomy and taxonomies used by the colleges, classification of double majors and double degrees, operational problems, and survey timing. In the 1979 validation study, these sources of nonsampling error were found to contribute to an error rate of 0.3 percent overreporting of bachelor's degrees and 1.3 percent overreporting of master's degrees. The differences, however, varied greatly among fields. Over 50 percent of the fields selected for the validation study had no errors identified. Categories of fields that had large differences were business and management, education, engineering, letters, and psychology. It was also shown that differences in proportion to the published figures were less than 1 percent for most of the selected fields that had some errors. Exceptions to these were: master's and Ph.D. programs in labor and industrial relations (20 percent and 8 percent); bachelors's and master's programs in art education (3 percent and 4 percent); bachelor's and Ph.D. programs in business and commerce, and in distributive education (5 percent and 9 percent); master's programs in philosophy (8 percent); and Ph.D. programs in psychology (11 percent).

Beginning with the 1986–87 academic year, the IPEDS completions survey replaced the HEGIS *Earned Degrees Conferred* survey.

Fall Enrollment in Colleges and Universities. This survey was part of the HEGIS series since its development. The enrollment survey response rate was relatively high; the 1985 response rate was 92 percent. Major sources of nonsampling error for this survey were classification problems, the unavailability of needed data, interpretation of definitions, the survey due date, and operational errors. Of these, the classification of students appears to have been the main source of error. Institutions had problems in correctly classifying first-time freshmen, other first-time students, and unclassified students for both full-time and part-time categories. These problems occurred most often at 2-year institutions (both private and public) and private 4-year institutions. In 1977-78, the classification problem led to an estimated overcount of 11,000 full-time students and an undercount of 19,000 part-time students. Although the ratio of error to the grand total was quite small (less than 1 percent), the percentage of errors was as high as 5 percent for detailed student levels and even higher at certain disaggregated levels.

Beginning with fall 1986, the survey system was redesigned with the introduction of the Integrated Postsecondary Education Data System (IPEDS, see above). The new survey system comprises all postsecondary institutions, but also maintains comparability with earlier surveys by allowing HEGIS institutions to be tabulated separately. The new system also provides for preliminary and revised data releases. This allows the Center flexibility to release early data sets while still maintaining a more accurate final data base.

Fall Staff in Postsecondary Institutions. This survey collects data on the number of full-time and part-time employees in postsecondary institutions, by occupation and sex. It combines selected data from the EEO-6 survey conducted by the U.S. Equal Employment Opportunity Commission (see separate description above) with data it collects from institutions not covered by the EEO-6.

The EEO-6 collects staff data from all public and private higher education institutions. Higher education institutions are those accredited at the college level by an agency recognized by the Secretary, U.S. Department of Education. NCES collects staff data from postsecondary institutions not covered by the EEO-6, including those with fewer than 15 full-time employees.

The Fall Staff survey includes the universe of 2- and 4-year institutions and a sample of less than 2-year private institutions. For the fall of 1989, survey instruments were mailed to 6,669 in-scope postsecondary education institutions, including 2,576 4-year schools, 2,739 2-year schools, and 283 public less-than-2-year schools. Survey instruments were also mailed to a sample of 1,071 private nonprofit and proprietary schools which represented 5,002 of these schools.

The Fall Staff survey had an overall response rate of 77.4 percent in 1989. This response rate was calculated as the ratio of the number of completed survey forms divided by the number of in-scope institutions. The response rate for higher education institutions was 89.6 percent.

Financial Statistics of Institutions of Higher Education. This survey was part of the HEGIS series throughout its existence. A number of changes were made in the financial survey instruments in 1975. In 1982 another change was made to include Pell Grants in federal restricted grants and contracts revenues and restricted scholarships and fellowships expenditures. While these changes were significant, only comparable information on trends is presented in this report, except where noted. Finance tables for this publication have been adjusted by subtracting the Pell Grant amounts from the later data to maintain comparability with pre-1982 data.

Other possible sources of nonsampling error in the financial statistics were nonresponse, imputation, and misclassification. The response rate has been over 90 percent for most of the years reported. The response rate for the latest (fiscal year 1985) survey was 87.6 percent.

Two general methods of imputation were used. If the prior year's data were available for a nonresponding institution, these data were inflated using the Higher Education Price Index and adjusted according to changes in enrollments. If no previous year's data were available, current data were used from peer institutions selected for location (state or region), control, level, and enrollment size of institution. For the most recent years reported, the imputation method did not include the adjustment for changes in enrollments, and new institutions which never reported to HEGIS surveys were not imputed. For the fiscal year 1985 survey, survey forms were mailed to 3,379 institutions. Reports were received from 2,959 institutions, and data for 370 institutions were estimated based on their fiscal year 1984 reports inflated by the Higher Education Price Index. The remaining 50 institutions were not imputed because they had never responded to HEGIS surveys. The imputed current-fund expenditures of the nonrespondents were generally less than 3 percent of the aggregate U.S. total.

To reduce reporting error, NCES used national standards for reporting finance statistics. These standards are contained in *Colleges and University Business Administration: Administrative Services (1974 Edition)*, published by the National Association of College and University Business Officers; *Audits of Colleges and Universities* (as amended August 31, 1974), by the American Institute of Certified Public Accountants; and *HEGIS Financial Reporting Guide (1980)*, by NCES. Wherever possible, definitions and formats in the survey form are consistent with those in these three accounting references.

Institutional Characteristics of Colleges and Universities. This survey provided the basis for the universe of institutions presented in the *Education Directory, Colleges and Universities*, and it was used in all other HEGIS data collection activities. The universe comprised institutions that offer at least a 1-year program of college-level studies leading toward a degree and that met certain accreditation criteria. In the fall, institutions included in the *Directory* the previous year received a computer printout of their information to update. All institutions reported were certified as eligible to be listed by the Division of Eligibility and Agency Evaluation within the U.S. Department of Education.

Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty. This survey has been conducted for most years from 1966–67 to 1987–88. Although the survey form was changed a number of times during those years, only comparable data are presented in this report. The data were collected from the individual colleges and universities. Until 1987, this survey differed from other HEGIS surveys in that imputations were not made for nonrespondents. Thus, there is greater possibility that the salary averages presented in this report may differ from the results of a complete enumeration of all colleges and universities. The response rate for the 1984-85 survey was 86.3 percent. The response rate for public colleges was substantially higher than the response rate for private colleges. It is probable that the public colleges' salary data were more accurate than the data for private colleges. Other sources of nonsampling error included computational errors and misclassification in reporting and processing. NCES checked individual colleges' data for internal and longitudinal consistency and contacted the colleges to check inconsistent data.

Integrated Postsecondary Education Data System

The Integrated Postsecondary Education Data System (IPEDS) surveys all postsecondary institutions, including universities and colleges as well as institutions offering technical and vocational education beyond the high school level. This survey, which began in 1986, will both replace and supplement the previous one, the Higher Education General Information Survey (HEGIS). For a full description of the various programs contained in IPEDS, therefore, the reader is referred to a discussion of the various HEGIS programs outlined below. What follows in this section is a brief overview of the IPEDS program.

The IPEDS consists of several integrated components that obtain information on who provides postsecondary education (institutions), who participates in it and completes it (students), what programs are offered and what programs are completed, and the resources involved in the provision of institutionally based postsecondary education, both human resources and financial resources. Specifically, these components include: institutional characteristics including institutional activity; fall enrollment, including age and residence; fall enrollment in occupationally specific programs; completions; finance; staff; salaries of full-time instructional faculty; and academic libraries.

The higher education portion of this survey is a census of all education institutions. However, data from the other technical and vocational institutions are collected through a sample survey. Thus, some portions of the data will be subject to sampling and nonsampling errors, while some portions will be subject only to nonsampling errors. The tabulations on institutional characteristics developed for this edition of the *Condition* are based on lists of all institutions and are not subject to sampling errors.

Further information on IPEDS may be obtained from:

William Freund
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

International Assessment of Educational Progress

In 1990–91, a total of 20 countries assessed the mathematics and science achievement of 13-year-old students and 14 assessed 9-year-old students in these same subjects. Some countries assessed virtually all age-eligible children in the appropriate age group; others confined their samples to certain geographic regions, language groups, or grade levels. The definition of populations often followed the structure of school systems, political divisions, and cultural distinctions. In some countries, significant proportions of age-eligible children were not represented because they did not attend school (see notes to supplemental tables ITM-1–4 and ITS-1–4). Also, in some countries, low rates of school or student participation mean results may be biased.

Typically, a random sample of 3,300 students from about 110 different schools was selected from each population at each age level; half were assessed in mathematics and half in science. A total of about 175,000 9- and 13-year-olds (those born in calendar years 1981 and 1977, respectively) were tested in 13 different languages in March 1991.

The achievement tests lasted one hour. These tests, given to 9-year-olds, included 62 questions in mathematics and 60 questions in science. Those for 13-year-olds included 76 questions in mathematics and 72 questions in science. In addition, students at each age spent about 10 minutes responding to questions about their backgrounds and home and school experiences. School administrators completed a school questionnaire.

Initial analyses involved the calculation of the percentage of correct answers and standard errors for individual questions. For each population, the weighted percentage of correct answers was calculated for each question. The results of students who omitted questions at the end of sections because they did not reach them were excluded form the calculations for those questions. For each percentage correct, an estimate of its standard error was calculated using the jackknife procedure. Percentage and standard errors were calculated for subgroups within each population, including gender and grade. Statistics for Canada were calculated using an appropriately weighted sample of responses drawn from the individual Canadian populations.

Further information on this survey can be obtained from:

Dawn D. Nelson
Data Development Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5605

National Assessment of Educational Progress

The National Assessment of Educational Progress (NAEP) is a Congressionally mandated study funded by the Office of Educational Research and Improvement, U.S. Department of Education. The overall goal of the project is to determine the nation's progress in education. To accomplish this goal, a cross-sectional study was designed and initially implemented in 1969. Periodically, NAEP has gathered information about levels of educational achievement across the country. NAEP has surveyed the educational accomplishments of 9-,13-, and 17-year-old students, and occasionally young adults, in 10 learning areas. Different learning areas were assessed annually and, as of 1980–81, biennially. Most areas have been periodically reassessed in order to measure possible changes in education achievement.

The reading, writing, U.S. history and civics assessments presented in this publication were conducted by either the Education Commission of the States (1969–1983) or the Educational Testing Service (1983 to the present). NAEP in-school assessments were based on a deeply stratified three-stage sampling design to obtain a nationally representative sample by age and, beginning in 1983–84, by grade. The first stage of sampling entails defining and selecting primary sampling units (PSUs). For each grade level (3, 7, and 11 or 12), the second stage entails enumerating, stratifying, and randomly selecting schools, both public and private, within each PSU selected at the first stage. The third stage involves randomly selecting students within a school for participation in NAEP. Assessment exercises were administered to small groups of students by specially trained personnel.

Information from NAEP is subject to both nonsampling and sampling error. Two possible sources of nonsampling error are nonparticipation and faulty instrumentation. The effects of nonparticipation are in some ways reduced through oversampling, although this does not assess the bias of nonparticipants. Instrumentation nonsampling error includes whether the NAEP assessment instruments measure what is being taught and in turn what is being learned by the students, ambiguous items or instructions, and insufficient time limits.

For further information on NAEP, contact:

Gary Phillips
Education Assessment Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

National Education Longitudinal Study of 1988

The National Educational Longitudinal Study of 1988 (NELS:88) is the third major longitudinal study sponsored by the National Center for Education Statistics. The two studies that preceded NELS:88, the National Longitudinal Study of the High School Class of 1972 (NLS-72) and High School and Beyond (HS&B) surveyed high school seniors (and sophomores in HS&B) through high school, postsecondary education, and work and family formation experiences. Unlike its predecessors, NELS:88 began with a cohort of eighth-grade students.

NELS:88 is designed to provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers. It complements and strengthens state and local efforts by furnishing new information on how school policies, teacher practices, and family involvement affect student educational outcomes (i.e., academic achievement, persistence in school, and participation in postsecondary education). The base-year NELS:88 was a multi-faceted study questionnaire with four cognitive tests, and questionnaires for students, teachers, parents and the school.

Sampling was first conducted at the school level and then at the student level within schools. The data were drawn from a nationally representative sample of 1,000 schools (800 public schools; and 200 private schools, including parochial institutions). Within this school sample, 26,000 eighth-grade students were selected at random. The first followup revisited the same sample of students in 1990, when the 1988 eighth graders were in the 10th grade. Similar follow ups are planned for 1992, 1994, and 1996.

For more information on this survey, contact:

Jeffrey A. Owings
Elementary and Secondary Education Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5653

National Longitudinal Study

The National Longitudinal Study (NLS) of the high school class of 1972 began with the collection of base-year survey data from a sample of about 19,000 high school seniors in spring of 1972. Five more followup surveys of these students were conducted in 1973, 1974, 1976, 1979, and 1986. The NLS was designed to provide the education community with information on the transitions of young adults from high school through postsecondary education and the workplace.

The sample design for the NLS is a stratified, two-stage probability sample of students from all schools, public and private, in the 50 states and the District of Columbia with a 12th-grade enrollment during the 1971–72 school year. During the first stage of sampling, about 1,070 schools were selected for participation in the base-year survey. As many as 18 students were selected at random from each of the sample schools. The sizes of the school and student samples were increased during the first followup survey. Beginning with the first followup and continuing through the fourth followup, about 1,300 schools participated in the survey, and slightly under 23,500 students were sampled. The response rates for each of the different rounds of data collection have been 80 percent or higher.

Sample retention rates across the survey years have been quite high. For example, of the individuals responding to the base-year questionnaire, the percentages who responded to the first, second, third, and fourth followup questionnaires were about 94, 93, 89, and 83 percent, respectively.

Further information may be obtained from:

Aurora D'Amico
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

National Postsecondary Student Aid Study

The National Center for Education Statistics conducted the National Postsecondary Student Aid Study (NPSAS) for the first time during the 1986-87 school year. This survey established the first comprehensive student financial aid data base. Data were gathered from 1,074 postsecondary institutions and approximately 60,000 students and 24,000 parents. These data provided information on the cost of postsecondary education, the distribution of financial aid, and characteristics of both aided and non-aided students and their families. The survey also provided data on the distribution of financial aid, the nature of aid packages, and a profile of both aided and non-aided students.

In response to the continuing need for these data, NCES conducted the second cycle of NPSAS for the 1989-90 school year. In addition to replicating the earlier study, the 1990 NPSAS contains enhancements to the 1987 methodology that will fully meet the data needs of the financial aid community and of policymakers.

The 1990 in-school sample involved about 70,000 students selected from registrar lists of enrollees at 1,200 postsecondary institutions. The sample will include both aided and non-aided students. Student information such as field of study, education level and attendance status (part-time or full-time) will be obtained from registrar records. Types and amounts of financial aid and family financial characteristics will be abstracted from school financial aid records. Also, approximately 26,000 parents of students will be sampled. Data concerning family composition and parent financial characteristics will be compiled. Followup data collections are expected at 2-year intervals. Students enrolled in postsecondary education for the first time in 1990 will serve as the base for the longitudinal component of NPSAS.

Further information about this survey may be obtained from:

Andrew G. Malizio
National Center for Educational Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

National Survey of Postsecondary Faculty (NSOPF-88)

The National Survey of Postsecondary Faculty is a comprehensive survey of higher education instructional faculty in the fall of 1987. It was the first such survey conducted since 1963. It gathered information regarding the backgrounds, responsibilities, workloads, salaries, benefits, and attitudes of both full- and part-time instructional faculty in 2- and 4-year institutions under both public and private control. In addition, information was gathered from institutional and department-level respondents on such issues as faculty composition, new hires, departures and recruitment, retention, and tenure policies.

There were three major components of the study: a survey of institutional-level respondents at a stratified random sample of 480 U.S. colleges and universities; a survey of a stratified random sample of 3,029 eligible department chairpersons (or their equivalent) within the participating 4-year institutions; and a survey of a stratified random sample of 11,013 eligible faculty members within the participating institutions. Response rates to the three surveys were 88 percent, 80 percent, and 76 percent, respectively.

The universe of institutions from which the sample was selected was all accredited nonproprietary U.S. postsecondary institutions that grant a 2-year (AA) or higher degree and whose accreditation at the higher education level is recognized by the U.S. Department of Education. This includes religious, medical, and other specialized postsecondary institutions as well as 2- and 4-year nonspecialized institutions. According to the 1987 Integrated Postsecondary Education Data System (IPEDS), this universe comprised 3,159 institutions. The universe does not include proprietary 2- and 4-year institutions or less-than-2-year postsecondary institutions.

Further information about this survey may be obtained from:

Linda Zimbler
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

Projections of Education Statistics

Since 1964, NCES has published *Projections of Education Statistics*, projecting for elementary and secondary schools and institutions of higher education key statistics including enrollments, instructional staff, graduates, and earned degrees. *Projections* includes several alternative projection series and a methodology section describing the techniques and assumptions used to prepare them. Data in this edition of *The Condition of Education* reflect the intermediate *Projection* series only.

Differences between the reported and projected values are, of course, almost inevitable. An evaluation of past projections revealed that, at the elementary and secondary level, projections of enrollment have been quite accurate: mean absolute percentage differences for enrollment were less than 1 percent for projections from 1 to 5 years into the future, while those for teachers were less than 4 percent.

Since projections of time series are subject to errors both by the nature of statistics and the properties of projection methodologies, users are cautioned not to place too much confidence in the numerical values of the projections. Important but unforeseeable economic and social changes may lead to differences. Rather, projections are to be considered as indicators of broad trends.

For further information about projection methodology and accuracy, contact:

Debra E. Gerald
Statistical Standards and Methodology Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5650

Survey of Recent College Graduates

NCES has conducted periodic surveys of persons, about 1 year after graduation, to collect information on college outcomes. The "Recent College Graduates" surveys have concentrated on those graduates entering the teaching profession. To obtain accurate results on this subgroup, graduates who are newly qualified to teach have been oversampled in each of the surveys. The survey involves a two-stage sampling procedure. First, a sample of institutions awarding bachelor's and master's degrees is selected and stratified by percentage of education graduates, control, and type of institution. Second, for each of the selected institutions, a sample of degree recipients is chosen. The response rates on the recent college graduates survey have tended to be low because of the great difficulty in tracing the students after graduation. Much more of the nonresponse can be attributed to invalid mailing addresses than to refusals to participate. Despite their shortcomings, the data are presented in this report because they provide valuable information not available elsewhere about college outcomes. Users should be cautious about drawing conclusions based on data from small samples. It is also likely that the data are somewhat biased since the more mobile students, such as graduate students, are the most difficult to track for the survey.

The 1976 survey of 1974-75 college graduates was the first and smallest of the series. The sample consisted of 209 schools, of which 200 (96 percent) responded. Of the 5,506 graduates in the sample, 4,350 responded, for a response rate of 79 percent.

The 1981 survey was somewhat larger, with a coverage of 301 institutions and 15,852 graduates. Responses were obtained from 286 institutions, for an institutional response rate of 95 percent, and from 9,312 graduates (716 others were determined to be out of scope), for a response rate of 62 percent.

The 1985 survey requested data from 18,738 graduates from 404 colleges. Responses were obtained from 13,200 students, for a response rate of 74 percent (885 were out of scope). The response rate for the colleges was 98 percent. The 1987 survey form was sent to 21,957 graduates. Responses were received from 16,878, for a response rate of 79.7 percent.

Further information on this survey may be obtained from:

Peter Stowe
Postsecondary Education Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5652

Schools and Staffing Survey

Information on the school work force and teacher supply and demand are fundamental features of America's public and private school landscape. Yet, until recently, there has been a lack of data on characteristics of our children's teachers and administrators and their workplace conditions. The Schools and Staffing Survey (SASS) was designed to meet this need. This survey is a comprehensive public and private education database that combines and expands three separate surveys NCES has conducted in the past. These included surveys of teacher demand and shortage, of public and private schools, and of public and private school teachers. The school administrator survey is a new addition to the NCES database.

Schools were the primary sampling unit for SASS, and a sample of teachers was selected in each school; public school districts were included in the sample when one or more of their schools was selected. The 1987-88 SASS included approximately 12,800 schools (9,300 public and 3,500 private), 65,000 teachers (52,000 public and 13,000 private), and 5,600 public school districts. The survey was conducted by mail with telephone followups.

The SASS sample has been designed to support the following types of estimates and comparisons: national and state estimates for public schools and teachers; estimates for private schools and teachers at the national level and for selected orientation groupings; national comparisons of elementary, secondary, and combined schools and teachers. SASS was first conducted in the 1987–1988 school year, and again in 1991, and at 2-year intervals thereafter.

Another component of SASS is the Teacher Followup Survey (TFS). It consists of a subsample of SASS, and is implemented 1 year after the base-year survey. The survey identifies and collects data from various groups of teachers who were interviewed the previous year: 1) those persons who remain in the teaching profession, including those who remain in the same school, as well as those who have moved; and 2) those persons who have left the teaching profession. These data will be used to provide information about teacher attrition and retention in the public and private schools and to project teacher demand during the 1990s.

Further information on this survey may be obtained from:

Mary Rollefson
Elementary and Secondary Education Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, D.C. 20208-5653

Office for Civil Rights
U.S. Department of Education

The Office for Civil Rights (OCR) in the U.S. Department of Education conducts periodic surveys of elementary and secondary schools to obtain data on the characteristics of students enrolled in public schools throughout the nation. Racial/ethnic status, gender, limited English proficiency, and handicapping conditions are among the characteristics covered by recent surveys. Such information is required by OCR to fulfill its responsibilities under Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and section 504 of the Rehabilitation Act of 1973. The 1976 survey was a complete census of public school districts in the nation. The 1984 and 1986 surveys were based on samples. The universe, from which the districts were to be sampled, was defined to be all public schools in the nation (50 states and the District of Columbia). A universe file maintained by the National Center for Education Statistics from its Common Core of Data was used. The selection factors used in selecting the sample were (1) minimum percent coverage of a specific population variable, and (2) maximum percent standard deviation of a projection of a population variable from the sample to the universe total.

Stratification also included district size and state. The 1984 survey was a stratified random sample of approximately 3,500 school districts, representing approximately 34,000 schools. For 1986, the sample included 3,455 districts, containing 37,313 schools. Both the 1984 and 1986 surveys are subject to sampling and nonsampling errors.

For further information about these surveys contact

Survey Branch, Office for Civil Rights
Lawrence Bussey
Room 5525, Switzer Building
330 C Street SW
Washington, DC 20202

Office of Special Education and Rehabilitative Services
U.S. Department of Education

Annual Report to Congress on the Implementation of the Education of the Handicapped Act

The Education of the Handicapped Act (EHA) requires the Secretary of Education to transmit to Congress annually a report describing the progress in serving the nation's handicapped children. The annual report contains information on such children served by the public schools under the provisions of Part B of the EHA and for children served in state-operated programs (SOP) for the handicapped under Chapter I of the Education Consolidation and Improvement Act (ECIA). Statistics on children receiving special education and related services in various settings and school personnel providing such services are reported in an annual submission of data to the Office of Special Education and Rehabilitative Services (OSERS) by the 50 states, the District of Columbia, and the outlying areas. The child count information is based on the number of handicapped children receiving special education and related services on December 1 of each year for EHA and October 1 for Chapter I of ECIA/SOP.

Since each participant in programs for the handicapped is reported to OSERS, the data are not subject to sampling error. However, nonsampling error can occur from a variety of sources. Some states follow a noncategorical approach to the delivery of special education services but produce counts by handicapping condition only because EHA-B requires it. In those states that do categorize their handicapped students, definitions and labeling practices vary. In each case, even though states must use the federal definitions of the handicapping categories for reporting purposes, there is no way to judge the accuracy of these states' relabeling of their students for the federal count. Some states also have reported combined counts for some of the smaller categories of handicap.

These variations in labeling practices may help explain why there have been inconsistencies both year to year within a given state and from state to state in the ways in which students with more than one handicapping condition have been categorized. However, federal and state efforts to ensure that children are being classified and reported appropriately and efforts to achieve greater consistency in classification and reporting among states help minimize these variations.

Further information on the Annual Report to Congress may be obtained from:

Lou Danielson
Office of Special Education and
 Rehabilitative Services
Office of Special Education Programs
Room 3523, Switzer Building
330 C Street SW
Washington, DC 20202

Bureau of Justice Statistics
U.S. Department of Justice

National Crime Survey, School Crime Supplement

The National Crime Survey (NCS) conducted by the Bureau of Justice Statistics (BJS) collects data from a nationally representative sample of households. When a household is selected for inclusion in the sample, household members age 12 are interviewed for inclusion in the sample, household members age 12 or older are interviewed every 6 months for 3 years. During each interview information is obtained about the personal victimizations, if any, experienced by the interviewee in the 6 months preceding the interview. One member, generally over the age of 18, is asked about all crimes committed against the household during the preceding 6 months.

The NCS measures both attempted and completed incidents of the violent crimes of rape, robbery and aggravated and simple assault; personal thefts with and without contact; and the household crimes of burglary, household larceny and motor vehicle theft.

The School Crime Supplement to the NCS contains data collected in interviews conducted from January through June of 1989 as a supplement to the NCS data collection program. It focuses on personal crimes of violence and theft that were committed inside a school building or on school property only.

The only eligible respondents for this school crime supplement were those household members who were between the ages of 12 and 19, had attended school at any time during the 6 months preceding the interview and were enrolled in a school which would advance them towards the eventual receipt of a high school diploma.

Further information on the School Crime Supplement to the National Crime Survey may be obtained from:

Bruce Taylor
Bureau of Justice Statistics
633 Indiana Avenue NW
Washington, DC 20531

National Science Foundation

Survey of Earned Doctorates

The Survey of Earned Doctorates (SED) has been conducted annually by the National Research

Council, under contract, for the U.S. Department of Education, the National Endowment for the Humanities, the National Science Foundation, and other federal agencies since 1957. Information from the survey becomes part of the Doctorate Records File, which includes records for doctorates awarded since 1920 by regionally accredited universities and colleges. The universe consists of all recipients of doctoral degrees such as Ph.D. or D.Sc., but excludes the recipients of first-professional degrees such as the J.D. or M.D. Approximately 95 percent of the annual cohort of doctorate recipients have responded to the questionnaire which is distributed through the cooperation of the Graduate Deans. Partial data from public sources are added to the file for nonrespondents. The data for a given year include all doctorates awarded in the 12-month period ending on June 30 of that year.

Data for the SED are collected directly from individual doctorate recipients. In addition to the field and specialty of the degree, the recipient is asked to provide educational history, selected demographic data, and information on postgraduate work and study plans. The National Center for Education Statistics' "Survey of Earned Degrees," part of its Higher Education General Information Survey (HEGIS), collects data from institutions, not individuals. Therefore, the number of doctorates reported in SED differs slightly from HEGIS totals. Also, SED data are restricted to research doctorates.

The differences between the two data series have been generally consistent since 1960. The ratio of NCES/SED totals for all Ph.D.s has ranged from 1.01 to 1.06.

Further information on this survey can be obtained from Summary Report: *Doctorate Recipients from United States Universities*, various years, published by the National Research Council, or by contacting:

Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue NW
Washington, DC 20418

Survey of Doctorate Recipients

The Survey of Doctorate Recipients (SDR) is a biennial survey of individuals who have received doctorates in the humanities, sciences, and engineering over the past four decades. It has surveyed scientists (including social scientists and psychologists) and engineers since 1973 and humanists since 1977. It is conducted by the National Research Council with support from the National Science Foundation, the National Endowment for the Humanities, the National Institutes of Health, the Department of Agriculture, and the Department of Energy.

The population for the survey consists of individuals who have received doctorates during a 42-year period. To maintain the length of this timespan for each biennial survey, the two most recent graduating cohorts of Ph.D.s are added to the population, and the two oldest are eliminated. It is a longitudinal survey—that is, individual members of the survey panel are resurveyed every 2 years—and contains historical data on employment status, employment sector, primary work activity, academic rank, tenure status, salary, and other characteristics.

For a more detailed discussion of the history of the SDR, the sample, and other methodological issues, see: National Research Council, *Methodological Report of the 1987 Survey of Doctorate Recipients*, National Research Council, April 1989 (prepared by Mary Belisle).

For further information, contact:

Survey of Doctorate Recipients Project
Office of Scientific and Engineering Personnel
National Research Council
2101 Constitution Avenue NW (Room GR 412)
Washington, DC 20418

Scientific and Engineering Expenditures at Universities and Colleges Survey

The National Science Foundation's Survey of Scientific and Engineering Expenditures at Universities and Colleges originated in 1954 and has been conducted annually since 1972. The population surveyed in most years has consisted of the 500 to 600 universities and colleges that grant a graduate science or engineering degree and/or annually perform at least $50,000 in separately budgeted research and development (R&D), defined as current fund expenditures designed to produce specific research outcomes and funded either by an external agency to an institution or separately budgeted by an internal institution unit. The institutions included in this survey population expend over 95 percent of the nation's academic R&D funds. In addition, approximately 17 university administered federally funded research and development centers (FFRDCs) that are engaged in basic or applied research, development, or management of R&D activities are surveyed.

Since 1984 this survey has been conducted as a sample survey consisting of two strata: a certainty stratum including all doctorate-granting institutions, all historically black colleges and universities with R&D, and all university administered FFRDCs; and a probability stratum including a random sample of all nondoctorate-granting institutions that perform significant levels of research and development.

Further information on this survey may be obtained from *Guide to the National Science Foundation's Surveys of Academic Science and Engineering*, December 1990, published by the National Science Foundation, or by contacting:

Science and Engineering Activities Program
Division of Science Resources Studies
National Science Foundation, Room L-611
Washington, DC 20550

National Institute on Drug Abuse
U.S. Department of Health and Human Services

The National Institute on Drug Abuse is the primary supporter of the long-term study entitled *Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth* conducted by the University of Michigan, Institute for Social Research. One component of the study deals with student drug abuse. Results of a national sample survey have been published annually since 1975. Approximately 125 to 135 schools have participated each year. With the exception of 1975 when about 9,400 students participated in the survey, more than 15,000 students have participated in the survey annually. For the class of 1990, about 15,200 students responded to the survey. Over the years, the response rate has varied from 77 to 84 percent.

The data in this survey represent only high school seniors. Understandably, there will be some reluctance to admit illegal activities. Also, students who were out of school on the day of the survey were nonrespondents. The survey did not include high school dropouts. The inclusion of these two groups would tend to increase the proportion of individuals who had used drugs. A 1983 study found that the inclusion of the absentees could increase some of the drug usage estimates by as much as 2.7 percent. (Details on that study and its methodology were published in *Drug Use Among American High School Students, College Students, and Other Young Adults*, by Lloyd D. Johnston, Patrick M. O'Malley, and Jerald G. Bachman, available from the National Clearinghouse on Drug Abuse Information, 5600 Fishers Lane, Rockville, MD 20857.)

Further information on this survey may be obtained from:

National Institute on Drug Abuse
Division of Epidemiology and
Statistical Analysis
5600 Fishers Lane
Rockville, MD 20857

2. Private Research and Professional Associations

American College Testing Program

The American College Testing (ACT) Assessment is designed to measure educational development in the areas of English, mathematics, social studies, and natural sciences. The ACT Assessment is taken by college-bound high school students and the test results are used to predict how well students might perform in college.

Prior to the 1984–85 school year, national norms were based on a 10 percent sample of the students taking the test. Since then, national norms have been based on the test scores of all students taking the test. Moreover, beginning with 1984–85 these norms have been based on the most recent ACT scores available from students scheduled to graduate in the spring of the year. Duplicate test records are no longer used to produce national figures.

Separate ACT standard scores are computed for English, mathematics, social studies, and natural science. ACT standard scores are reported for each subject area on a scale from 1 to 36. The four ACT standard scores have a mean (average) of about 19 and a standard deviation of about 6 for college-bound students nationally. A composite score is obtained by taking the simple average of the four standard scores and is an indication of student's overall academic development across these subject areas.

It should be noted that college-bound students who take the ACT Assessment are not representative in some respects of college-bound students nationally. First, students who live in the Midwest, Rocky Mountains and Plains, and the South are overrepresented among ACT-tested students as compared with college-bound students nationally. Second, ACT-tested students tend to enroll in public colleges and universities more frequently than do college-bound students nationally.

The 1990 ACT assessment is significantly different from previous years. Consequently, it is not possible to make direct comparisons between scores earned in 1990 and those scores earned in previous years. To permit continuity in tracking of score trends, ACT has established links between scores earned on ACT tests administered before October 1989 and scores on the new ACT. The 1990 data are based on 817,096 students who graduated from high school in the spring of 1990 and who took the ACT assessment on national test dates during their junior or senior year.

For further information, contact:

The American College Testing Program
2201 North Dodge Street
P.O. Box 168
Iowa City, IA 52243

American Federation of Teachers

The American Federation of Teachers (AFT) reports national and state average salaries and earnings of teachers, other school employees, government workers, and professional employees over the past 25 years. The AFT's survey of state departments of education obtains information on minimum salaries, experienced teachers reentering the classroom, and teacher age and experience. Most data from the survey are reported as received, although some data are confirmed by telephone. These data are available in the AFT's annual report *Salary and Analysis of Salary Trends*. While serving as the primary vehicle for reporting the results of the AFT's annual survey of state departments of education, several other data sources are also used in this report.

Further information on this survey can be obtained from:

American Federation of Teachers
555 New Jersey Avenue NW
Washington, DC 20001

College Entrance Examination Board

The Admissions Testing Program of the College Board comprises a number of college admissions tests, including the Preliminary Scholastic Aptitude Test (PSAT) and the Scholastic Aptitude Test (SAT). High school students participate in the testing program as sophomores, juniors, or seniors—some more than once during these 3 years. If they have taken the tests more than once, only the most recent scores are tabulated. The PSAT and SAT report subscores in the areas of mathematics and verbal ability.

The SAT results are not representative of high school students or college-bound students nationally since the sample is self-selected. Generally tests are taken by students who need the results to attend a particular college or university. The state totals are greatly affected by the requirements of its state colleges. Public colleges in a number of states require ACT scores rather than SAT scores. Thus the proportion of students taking the SAT in these states is very low and is inappropriate for any comparison. In recent years about 1 million high school students have taken the examination annually.

Further information on the SAT can be obtained from:

College Entrance Examination Board
Educational Testing Service
Princeton, NJ 08541

Gallup Poll

Each year the Gallup Poll conducts the "Public Attitudes Toward the Public Schools" survey, funded by Phi Delta Kappa. The survey includes interviews with approximately 1,600 adults representing the civilian noninstitutional population 18 years old and over.

The sample used in the 22nd annual survey was made up of a total of 1,594 respondents and is described as a modified probability sample of the nation. Personal, in-home interviewing was conducted in representative areas of the nation and types of communities. Approximately 67 percent of the respondents had no children in school, 30 percent were parents of children in public schools, and 6 percent had children attending nonpublic schools. This total is greater than 100 percent because some parents had children attending both public and nonpublic schools.

The survey is a sample survey and is subject to sampling error. The size of error depends largely on the number of respondents providing data. For example, an estimated percentage of about 10 percent based on the responses of 1,000 sample members has an approximate sampling error of 2 percent at the 95 percent confidence level. The sampling error for the difference in two percentages (50 percent versus 41 percent) based on two samples of 750 members and 400 members, respectively, is about 8 percent.

Further information on this survey can be obtained from:

Gallup Poll
Phi Delta Kappa
P.O. Box 789
Bloomington, IN 47402-0789

Graduate Record Examination Council

All students who have taken the Graduate Record Examinations (GRE) General Test were asked a series of background information questions. These responses and the test scores themselves form the basis for continuing GRE Program research. In addition, these data are compiled and included in an annual report. The 12th in the series is *A Summary of Data Collected From Graduate Record Examinations Test Takers During 1986–1987.*

The GRE cautions users of these data that "information in these reports is based solely on examinees who took the Graduate Record Examination (GRE) General Test and should not be interpreted as being representative of any other group. The report does not present data for all baccalaureate degree recipients, for all graduate school applicants, or for all first-time graduate school enrollees." Nevertheless, the test-taking group is a large subset (albeit a self-selected one) of each of these groups.

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Further information on this and previous editions of the report may be obtained by contacting:

Office of the GRE Program Director
Educational Testing Service
Princeton, NJ 08541

National Education Association

Estimates of School Statistics

The National Education Association (NEA) reports revenues and expenditure data in its annual publication, *Estimates of School Statistics.* Each year NEA prepares regression-based estimates of financial and other education statistics and submits them to the states for verification. Generally about 30 states adjust these estimates based on their own data. These preliminary data are published by NEA along with revised data from previous years. States are asked to revise previously submitted data as final figures become available. The most recent publication contains all changes reported to the NEA.

Some tables in *The Condition of Education* use revised estimates of financial data prepared by NEA because it was the most current source. Since expenditure data reported to NCES must be certified for use in the U.S. Department of Education formula grant programs (such as Chapter I of the Education Consolidation and Improvement Act), NCES data are not available as soon as NEA estimates.

Further information can be obtained from:

National Education Association—Research
1201 16th Street NW
Washington, DC 20036

Other Organizational Sources

Organization for Economic Cooperation and Development

The Organization for Economic Cooperation (OECD) and Development publishes analyses of national policies in education, training, and economics in 23 countries. The countries surveyed are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States, and Yugoslavia.

Since only developed nations, mostly European, are included in OECD studies, the range of analysis is limited. However, OECD data allow for some detailed international comparison of financial resources or other education variables to be made for this selected group of countries.

Further information can be obtained from:
OECD
2, rue Andre-Pascal
75775 PARIS CEDEX 16, France

United Nations Educational, Scientific, and Cultural Organization

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) conducts annual surveys of education statistics of its member countries. Besides official surveys, data are supplemented by information obtained by UNESCO through other publications and sources. Each year more than 200 countries reply to the UNESCO surveys. In some cases, estimates are made by UNESCO for particular items such as world and continent totals. While great efforts are made to make them as comparable as possible, the data still reflect the vast differences among the countries of the world in the structure of education. While there is some agreement about the reporting of first- and second-level data, the third level (postsecondary education) presents numerous substantial problems. Some countries report only university enrollment while other countries report all postsecondary, including vocational and technical schools and correspondence programs. A very high proportion of some countries' third-level students attend institutions in other countries. While definition problems are many in this sort of study, other survey problems should not be overlooked. The member countries that provide data to UNESCO are responsible for their validity. Thus, data for particular countries are subject to nonsampling error and perhaps sampling error as well. Some countries may furnish only rough estimates while data from other countries may be very accurate. Other difficulties are caused by the varying periodicity of data collection among the countries of the world. In spite of such problems, many researchers use UNESCO data because they are the best available. Users should examine footnotes carefully to recognize some of the data limitations.

More complete information may be obtained from the Statistical Yearbook published by UNESCO or from:

Office of Statistics
UNESCO
Place de Fontenoy
75700 Paris, France

Glossary

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Academic support: (See Expenditures.)

Appropriations (federal funds): Budget authority provided through the congressional appropriation process that permits federal agencies to incur obligations and to make payments.

Appropriation (institutional revenues): An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

Associate degree: A degree granted for the successful completion of a sub-baccalaureate program of studies, usually requiring at least 2 years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work/study program.

Auxiliary enterprises: (See Revenues.)

Average daily membership (ADM): The aggregate membership of a school during a reporting period (normally a school year) divided by the number of days school is in session during this period. Only days on which the pupils are under the guidance and direction of teachers should be considered as days in session. The average daily membership for groups of schools having varying lengths of terms is the average of the average daily memberships obtained for the individual schools.

Baccalaureate degree: (See Bachelor's degree.)

Bachelor's degree: A degree granted for the successful completion of a baccalaureate program of studies, usually requiring at least 4 years (or equivalent) of full-time college-level study. This includes degrees granted in a cooperative or work/study program.

Carnegie unit: A standard of measurement used for secondary education that represents the completion of a course that meets one period per day for one year.

In Indicator 25 Carnegie units are divided among 3 curricular areas: Academic, vocational, and personal use. Within each area, courses are assigned as follows.

Academic: **Mathematics** (basic, general, applied, pre-algebra, algebra I, geometry, advanced/other, advanced calculus); **Science** (survey, biology, chemistry, physics); **English** (survey, literature, composition, speech); **Social Studies** (American history, World history, American government, humanities/other); **Fine Arts** (fine arts and crafts, music, drama/dance); **Foreign Languages** (survey, English for speakers of other languages, years 1-4 by language).

Vocational: **Consumer and Homemaking Education; General Labor Market Preparation** (typewriting 1, introductory industrial arts, work experience/career exploration, general labor market skills); **Specific Labor Market Preparation** (agriculture/renewable resources, business, marketing and distribution, health occupations, occupational home economics, trade and industry, technical and communications).

Personal Use: **General skills**; **Health** (physical education); **Religion**; **Military Science**.

Catholic school: (See Orientation.)

Cohort: A group of individuals who have a statistical factor in common, for example, year of birth.

College: A postsecondary school which offers general or liberal arts education, usually leading to an associate's, bachelor's, master's, doctor's, or first-professional degree. Junior colleges and community colleges are included under this terminology.

Combined elementary and secondary school: A school that encompasses instruction at both the elementary and the secondary levels. Examples of combined elementary and secondary school grade spans would be 1 through 12 or 5 through 12.

Computer and information science: A group of instructional programs that describes computer and information sciences, including computer programming, data processing, and information systems.

Constant dollars: Dollar amounts that have been adjusted by means of price and cost indexes to eliminate inflationary factors and allow direct comparison across years.

Consumer price index (CPI): This price index measures the average change in the cost of a fixed market basket of goods and services purchased by consumers.

Control of institutions: A classification of institutions of elementary/secondary or higher education by whether the institution is operated by publicly elected or appointed officials (public control) or by privately elected or appointed officials and derives its major source of funds from private sources (private control).

Current dollars: Dollar amounts that have not been adjusted to compensate for inflation.

Current expenditures per pupil in enrollment: (See Expenditures)

Current-fund expenditures: (See Expenditures.)

Current-fund revenues: (See Revenues.)

Current Population Survey (CPS): (See Guide to Sources, p.000)

Dependent student: A student who under federal criteria is considered to be financially dependent on her or his parents or guardians. Most students are considered dependent until they are 24 years old.

Dropout: The term is used both to describe an event—leaving school before graduating—and a status—an individual who is not in school and is not a graduate. Transferring schools, for example, from a public to a private school, is not regarded as a dropout event. A person who drops out of school may later return and graduate. At the time the person left school initially, he/she is called a *dropout*. At the time the person returns to school, he/she is called a *stopout*. Measures to describe these often complicated behaviors include the event dropout rate (or the closely related school persistence rate), the status dropout rate, and the high school completion rate.

Doctor's degree: An earned degree carrying the title of Doctor. The Doctor of Philosophy degree (Ph.D.) is the highest academic degree and requires mastery within a field of knowledge and demonstrated ability to perform scholarly research. Other doctorates are awarded for fulfilling specialized requirements in professional fields, such as education (Ed.D.) musical arts (D.M.A.), business administration (D.B.A.), and engineering (D.Eng. or D.E.S.). Many doctor's degrees in both academic and professional fields require an earned master's degree as a prerequisite. First-professional degrees, such as M.D. and D.D.S., are not included under this heading.

Educational and general expenditures: (See Expenditures)

Educational attainment: The highest grade of regular school attended and completed.

Elementary school: A school classified as elementary by state and local practice and composed of any span of grades not above grade 8. A preschool or kindergarten school is included under this heading only if it is an integral part of an elementary school or a regularly established school system.

Elementary/secondary school: As reported in this publication, includes only regular school (i.e., schools that are part of state and local school systems, and also most not-for-profit private elementary/secondary schools, both religiously affiliated and nonsectarian). Schools not reported include subcollegiate departments of institutions of higher education, residential schools for exceptional children, federal schools for Indians, and federal schools on military posts and other federal installations.

Employed: Includes civilian, noninstitutional persons who (1) worked during any part of the survey week as paid employees; worked in their own business, profession, or farm; or worked 15 hours or more as unpaid workers in a family-owned enterprise; or (2) were not working but had jobs or businesses from which they were temporarily absent due to illness, bad weather, vacation, labor-management dispute, or personal reasons whether or not they were seeking another job.

Engineering and engineering technologies: Instructional programs that describe the mathematical and natural sciences gained by study, experience, and practice and applied with judgment to develop ways to utilize economically the materials and forces of nature for the benefit of mankind. Includes programs that prepare individuals to support and assist engineers and similar professionals.

English: A group of instructional programs that describes the English language arts, including composition, creative writing, and the study of literature.

Enrollment: The total number of students registered in a given school unit at a given time, generally in the fall of a year.

Expected family contribution (EFC): The amount that a family is expected to pay toward meeting postsecondary costs of attendance (students and parents of dependent students are both expected to make contributions). This amount is determined through an analysis of need (for example, the Congressional Methodology) and is based on taxable and nontaxable income and assets as well as family size, the number of family members attending postsecondary institutions, extraordinary medical expenses, and so forth. For dependent students, the EFC consists of both a parental contribution and a separately calculated student contribution. The minimum student contribution in 1988–89 was $700 for freshmen and $900 for other undergraduates.

Expenditures: Charges incurred, whether paid or unpaid, which are presumed to benefit the current fiscal year. For elementary/secondary schools, these include all charges for current outlays plus capital outlays and interest on school debt. For institutions of higher education, these include current outlays plus capital outlays. For government, these include charges net of recoveries and other correcting transactions other than for retirement of debt, investment in securities, extension of credit, or as agency transaction. Government expenditures include only external transactions, such as the provision of perquisites or other payments in kind. Aggregates for groups of governments exclude intergovernmental transactions among the governments.

Academic support: This category of college expenditures includes expenditures for support services that are an integral part of the institution's primary missions of instruction, research, or public service. Includes expenditures for libraries, galleries, audio/visual services, academic computing support, ancillary support, academic administration, personnel development, and course and curriculum development.

Current expenditures (elementary/secondary): The expenditures for operating local public schools, excluding capital outlay and interest on school debt. These expenditures include such items as salaries for school personnel, fixed charges, student transportation, school books and materials, and energy costs. Beginning in 1980-81, expenditures for state administration are excluded.

Current expenditures per pupil in enrollment: (See Expenditures.) Current expenditures for the regular school term divided by the total number of students registered in a given school unit at a given time, generally in the fall of a year.

Current-fund expenditures (higher education): Money spent to meet current operating costs, including salaries, wages, utilities, student services, public services, research libraries, scholarships and fellowships, auxiliary enterprises, hospitals, and independent operations. Excludes loans, capital expenditures, and investments.

Educational and general expenditures: The sum of current funds expenditures on instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, and awards from restricted and unrestricted funds.

Instruction: That category including expenditures of the colleges, schools, departments, and other instructional divisions of higher education institutions, and expenditures for departmental research and public service which are not separately budgeted. Includes expenditures for both credit and noncredit activities. Excludes expenditures for academic administration where the primary function is administration (e.g., academic deans).

Scholarships and fellowships: This category of college expenditures applies only to money given in the form of outright grants and trainee stipends to individuals enrolled in formal coursework, either for credit or not. Aid to students in the form of tuition or fee remissions is included. College work-study funds are excluded and are reported under the program in which the student is working. In the tabulations in this volume, Pell Grants are not included in this expenditure category.

Expenditures per pupil: Charges incurred for a particular period of time divided by a student unit of measure, such as enrollment, average daily attendance or average daily membership.

Federal aid: Student financial aid whose source is the federal government. This aid can either be provided by or administered by a federal agency. Federal agencies providing aid include the Department of Education, Department of Health and Human Services, Department of Defense, Veterans Administration, and the National Science Foundation. Federal aid can be in the form of grants, loans, and work-study aid.

Federal funds: Amounts collected and used by the federal government for the general purposes of the government. There are four types of federal fund accounts: the general fund, special funds, public enterprise funds, and intragovernmental funds. The major federal fund is the general fund, which is derived from general taxes and borrowing. Federal funds also include certain earmarked collections, such as those generated by and used to finance a continuing cycle of business-type operations.

First-professional degree: A degree that signifies both completion of the academic requirements for beginning practice in a given profession and a level of professional skill beyond that normally required for a bachelor's degree. This degree usually is based on a program requiring at least 2 academic years of work prior to entrance and a total of at least 6 academic years of work to complete the degree program, including both prior-required college work and the professional program itself. By NCES definition, first-professional degrees are awarded in the fields of dentistry (D.D.S or D.M.D.), medicine (M.D.), optometry (O.D.), osteopathic medicine (D.O.), pharmacy (D.Phar.), podiatric medicine (D.P.M.), veterinary medicine (D.V.M.), chiropractic (D.C. or D.C.M.), law (J.D.), and theological professions (M.Div. or M.H.L.).

Fiscal year: The yearly accounting period for the federal government, which begins on October 1 and ends on the following September 30. The fiscal year is designated by the calendar year in which it ends; for example, fiscal year 1992 begins on October 1, 1991, and ends on September 30, 1992. (From fiscal year 1844 to fiscal year 1976 the fiscal year began on July 1 and ended on the following June 30.)

Foreign languages: A group of instructional programs that describes the structure and use of language that is common or indigenous to people of the same community or nation, the same geographical area, or the same cultural traditions. Programs cover such features as sound, literature, syntax, phonology, semantics, sentences, prose, and verse, as well as the development of skills and attitudes used in communicating and evaluating thoughts and feelings through oral and written language.

Full-time enrollment: The number of students enrolled in higher education courses with total credit load equal to at least 75 percent of the normal full-time course load.

Full-time-equivalent (FTE) enrollment: For institutions of higher education, enrollment of full-time students, plus the full-time equivalent of part-time students as reported by institutions. In the absence of an equivalent reported by an institution, the FTE enrollment is estimated by adding one-third of part-time enrollment to full-time enrollment.

Full-time instructional faculty: Those members of the instruction/research staff who are employed full-time as defined by the institution, including faculty with released time for research and faculty on sabbatical leave. Full-time counts exclude faculty who are employed to teach less than two semesters, three quarters, two trimesters, or two 4-month sessions; replacements for faculty on sabbatical leave or those on leave without pay; faculty for preclinical and clinical medicine; faculty who are donating their services; faculty who are members of military organizations and paid on a different pay scale from civilian employees; academic officers, whose primary duties are administrative; and graduate students who assist in the instruction of courses.

GED recipient: A person who has obtained certification of high school equivalency by meeting state requirements and passing an approved exam, which is intended to provide an appraisal of the person's achievement or performance in the broad subject matter areas usually required for high school graduation. (See GED test.)

General educational development (GED) test: A test administered by the American Council on Education as the basis for awarding a high school equivalent certification.

Geographic region: The four regions used by the Bureau of the Economic Analysis of the U.S. Department of Commerce, the National Assessment of Educational Progress, and the National Education Association are as follows (Note that the National Education Association designated the Central region as Middle region in its classification):

Northeast

Connecticut
Delaware
District of Columbia
Maine
Maryland
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

Southeast

Alabama
Arkansas
Florida
Georgia
Kentucky
Louisiana
Mississippi
North Carolina
South Carolina
Tennessee
Virginia
West Virginia

Central (Middle)

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska
North Dakota
Ohio
South Dakota
Wisconsin
Utah
Washington
Wyoming

West

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oklahoma
Oregon
Texas

Government appropriation: An amount (other than a grant or contract) received from or made available to an institution through an act of a legislative body.

Government grant or contract: Revenues from a government agency for a specific research project or other program.

Graduate: An individual who has received formal recognition for the successful completion of a prescribed program of studies.

Graduate record examination (GRE): Multiple-choice examinations administered by the Educational Testing Service and taken by applicants who are intending to attend certain graduate schools. Two generalized tests are offered, plus specialized tests in a variety of subjects areas. Ordinarily, a student will take only the specialized test that applies to the intended field of study.

Grant: Also known as scholarships, these are funds for postsecondary education that do not have to be repaid.

Gross domestic product (GDP): Gross national product less net property income from abroad. Both gross national product and gross domestic product aggregate only the incomes of residents of a nation, corporate and individual, deriving directly from the current production of goods and services. However, gross national product also includes net property from abroad. (See also Gross national product.)

Gross national product (GNP): A measure of the money value of the goods and services available to the nation from economic activity. GNP can be viewed in terms of expenditure categories which include purchases of goods and services by consumers and government, gross private domestic investment, and net exports of goods and services. The goods and services included are largely those bought for final use (excluding illegal transactions) in the market economy. A number of inclusions, however, represent imputed values, the most important of which is rental value of owner-occupied housing. GNP, in this broad context, measures the output attributable to the factors of production—labor and property—supplied by U.S. residents.

High school: A secondary school offering the final years of high school work necessary for graduation, usually including grades 10, 11, 12 (in a 6-3-3 plan) or grades 9, 10, 11, and 12 (in a 6-2-4 plan).

High school program: A program of studies designed to prepare students for their postsecondary education and occupation. Four types of programs are usually distinguished—academic, vocational, general, and personal use. An academic program is designed to prepare students for continued study at a college or university. A vocational program is designed to prepare students for employment in one or more semiskilled, skilled, or technical occupations. A general program is designed to provide students with the understanding and competence to function effectively in a free society and usually represents a mixture of academic and vocational components. A personal use program provides a student with general skills in areas such as health, religion, and military science.

Higher education: Study beyond secondary school at an institution that offers programs terminating in an associate, baccalaureate, or higher degree.

Higher education institutions (general definition): Institutions providing education above the instructional level of the secondary schools, usually beginning with grade 13. Typically, these institutions include colleges, universities, graduate schools, professional schools, and other degree-granting institutions.

Higher Education Price Index: A price index which measures average changes in the prices of goods and services purchased by colleges and universities through current-fund education and general expenditures (excluding expenditures for sponsored research and auxiliary enterprises).

Humanities: Instructional programs in the following fields: area and ethnic studies, foreign languages, letters, liberal/general studies, multi/interdisciplinary studies, philosophy and religion, theology, and the visual and performing arts.

Independent operations: A group of self-supporting activities under control of a college or university. For purposes of financial surveys conducted by the National Center for Education Statistics, this category is composed principally of federally funded research and development centers (FFRDC).

Inflation: An upward movement in general price levels that results in a decline of purchasing power.

Institutional support: The category of higher education expenditures that includes day-to-day operational support for colleges, excluding expenditures for physical plant operations. Examples of institutional support include general administrative services, executive direction and planning, legal and fiscal operations, and community relations.

Instruction: (See Expenditures)

Instructional staff: Full-time-equivalent number of positions, not the number of different individuals occupying the positions during the school year. In local schools includes all public elementary and secondary (junior and senior high) day-school positions that are in the nature of teaching or in the improvement of the teaching-learning situation. Includes consultants or supervisors of instruction, principals, teachers, guidance personnel, librarians, psychological personnel, and other instructional staff. Excludes administrative staff, attendance personnel, clerical personnel, and junior college staff.

Labor force: Persons employed as civilians, unemployed, or in the armed services during the survey week. The "civilian labor force" comprises all civilians classified as employed or unemployed. (Also see Employed and Unemployed.)

Life sciences: Life sciences are instructional programs that describe the systematic study of living organisms. Life sciences include biology, biochemistry, biophysics, and zoology.

Limited-English proficient: A concept developed to assist in identifying those language-minority students (children from language backgrounds other than English) who need language assistance services, in their own language or in English, in the schools. The Bilingual Education Act, reauthorized in 1988 (P.L. 100-297), describes a limited English proficient (LEP) student as one who:

1) meets one or more of the following conditions:
    a) the student was born outside of the United States or whose native language is not English;
    b) the student comes from an environment where a language other than English is dominant; or
    c) the student is American Indian or Alaskan Native and comes from an environment where a language other than English has had a significant impact on his/her level of English language proficiency; and
2) has sufficient difficulty speaking, reading, writing, or understanding the English language to deny him or her the opportunity to learn successfully in English-only classrooms.

In practice, there are many ways of making this determination about a individual student which are being used by school systems across the United States. These include various cominations of home language surveys, informal teacher determination, formal interviews, and a number of types of assessment tests for classification, placement, and monitoring of progress.

Loan: Borrowed money that must be repaid.

Local education agency (LEA): (See School district.)

Master's degree: A degree awarded for successful completion of a program generally requiring 1 or 2 years of full-time college-level study beyond the bachelor's degree. One type of master's degree including the Master of Arts degree, or M.A., and the Master of Science degree, or M.S., is awarded in the liberal arts and sciences for advanced scholarship in a subject field or discipline and demonstrated ability to perform scholarly research. A second type of master's degree is awarded for the completion of a professionally oriented program, for example, an M.Ed. in education, an M.B.A. in business administration, an M.F.A. in fine arts, an M.M. in music, an M.S.W. in social work, and an M.P.A. in public administration. A third type of master's degree is awarded in professional fields for study beyond the first-professional degree, for example, the Master of Laws (LL.M.) and Master of Science in various medical specializations.

Mathematics: A group of instructional programs that describes the science of logical symbolic language and its application.

Metropolitan population: The population residing in metropolitan statistical areas (MSAs). (See Metropolitan statistical area.)

Metropolitan Statistical Area (MSA): A large population nucleus and the nearby communities which have a high degree of economic and social integration with that nucleus. Each MSA consists of one or more entire counties (or county equivalents) that meet specified standards pertaining to population, commuting ties, and metropolitan character. In New England, towns and cities, rather than counties, are the basic units. MSAs are designated by the Office of Management and Budget. An MSA includes a city and, generally, its entire urban area and the remainder of the county or counties in which the urban area is located. A MSA also includes such additional outlying counties which meet specified criteria relating to metropolitan character and level of commuting of workers into the central city or counties. Specified criteria governing the definition of MSAs recognized before 1980 are published in **Standard Metropolitan Statistical Areas: 1975**, issued by the Office of Management and Budget.

New MSAs were designated when 1980 counts showed that they met one or both of the following criteria:

> Included a city with a population of at least 50,000 within their corporate limits; or
>
> Included a Census Bureau-defined urbanized area (which must have a population of at least 50,000) and a total MSA population of at least 100,000 (or, in New England, 75,000).

Modal grade: The modal grade is the year of school in which the largest proportion of students of a given age is enrolled. Enrolled persons are classified according to their relative progress in school, that is, whether the grade or year in which they were enrolled was below, at, or above the modal (or typical) grade for persons of their age at the time of the survey.

National Assessment of Educational Progress (NAEP) (See Guide to Sources, p. 000)

Natural sciences: A group of fields of study which includes the life sciences, physical sciences, and mathematics.

Nonmetropolitan residence group: The population residing outside metropolitan statistical areas. (See Metropolitan statistical area.)

Nonsupervisory instructional staff: Persons such as curriculum specialists, counselors, librarians, remedial specialists, and others possessing education certification but not responsible for day-to-day teaching of the same group of pupils.

Nursery school: (See preprimary).

Obligations Amounts of orders placed, contracts awarded, services received, or similar legally binding commitments made by federal agencies during a given period that will require outlays during the same or some future period.

Orientation (private school): The group or groups, if any, with which a private elementary/secondary school is affiliated, or from which it derives subsidy or support:

> **Catholic school**: A private school over which a Roman Catholic church group exercises some control or provides some form of subsidy. Catholic schools for the most part include those operated or supported by: a parish, a group of parishes, a diocese, or a Catholic religious order.
>
> **Other religious school**: A private school affiliated with an organized religion or denomination other than Roman Catholicism or which has a religious orientation other than Catholic in its operation and curriculum.
>
> **Nonsectarian school**: A private school whose curriculum and operation are independent of religious orientation and influence in all but incidental ways.

Outlays: The value of checks issued, interest accrued on the public debt, or other payments made, net of refunds and reimbursements.

Part-time enrollment: The number of students enrolled in higher education courses with a total credit load less than 75 percent of the normal full-time credit load.

Personal income: Current income received by persons from all sources minus their personal contributions for social insurance. Classified as "persons" are individuals (including owners of unincorporated firms), nonprofit institutions serving individuals, private trust funds, and private noninsured welfare funds. Personal income includes transfers (payments not resulting from current production) from government and business such as social security benefits, and military pensions, but excludes transfers among persons.

Physical sciences: Physical sciences are instructional programs that describe inanimate objects, processes, or matter, energy, and associated phenomena. Physical sciences include astronomy, astrophysics, atmospheric sciences, chemistry, geology, physics. planetary science, and science technologies.

Postsecondary education: The provision of formal instructional programs with a curriculum designed primarily for students who have completed the requirements for a high school diploma or equivalent. This includes programs of an academic, vocational, and continuing professional education purpose, and excludes avocational and adult basic education programs.

Preprimary: Elementary education programs for children who are too young for first-grade. The year before first-grade is called kindergarten; the year(s) before kindergarten are called preschool, nursery school, or prekindergarten. Not included in prekindergarten is essentially custodial care provided in private homes. Prekindergarten programs may be provided in regular elementary schools (with kindergarten, first- and higher grade programs) or in preschools (with only prekindergarten programs.)

Prekindergarten: (See preprimary).

Private school or institution: A school or institution which is controlled by an individual or agency other than a state, a subdivision of a state, or the federal government, which is usually supported primarily by other than public funds, and the operation of whose program rests with other than publicly elected or appointed officials.

Proprietary institution: An educational institution that is under private control but whose profits derive from revenues subject to taxation.

Racial/ethnic group: Classification indicating general racial or ethnic heritage based on self-identification, as in data collected by the Bureau of the Census, or on observer identification, as in data collected by the Office for Civil Rights. These categories are in accordance with the Office of Management and Budget standard classification scheme presented below:

> **White**: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly in this volume.
>
> **Black**: A person having origins in any of the black racial groups in Africa. Normally excludes persons of Hispanic origin except for tabulations produced by the Bureau of the Census, which are noted accordingly in this volume.
>
> **Hispanic**: A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.
>
> **Asian or Pacific Islander**: A person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area includes, for example, China, India, Japan, Korea, the Philippine Islands, and Samoa.
>
> **American Indian or Alaskan Native**: A person having origins in any of the original peoples of North America and maintaining cultural identification through tribal affiliation or community recognition.

Remedial education: Instruction for a student lacking those reading, writing, or math skills necessary to perform college-level work at the level required by the attended institution.

Revenues: All funds received from external sources, net of refunds, and correcting transactions. Noncash transactions such as receipt of services, commodities, or other receipts "in kind" are excluded as are funds received from the issuance of debt, liquidation of investments, and nonroutine sale of property.

> **Auxiliary enterprises:** (See Revenues). This category includes those essentially self-supporting operations which exist to furnish a service to students, faculty, or staff, and which charge a fee that is directly related to, although not necessarily equal to, the cost of the service. Examples are residence halls, food services, college stores, and intercollegiate athletics.
>
> **Current-fund revenues (higher education)**: Money received during the current fiscal year from revenue which can be used to pay obligations currently due, and surpluses reappropriated for the current fiscal year.

Salary: The total amount regularly paid or stipulated to be paid to an individual, before deductions, for personal services rendered while on the payroll of a business or organization.

Scholarships and fellowships: (See Expenditures)

Scholastic Aptitude Test (SAT): An examination administered by the Educational Testing Service and used to predict the facility with which an individual will progress in learning college-level academic subjects.

School climate: *The social system and culture of the school, including the organizational structure of the school and values and expectations within it.*

School district: *An education agency at the local level that exists primarily to operate public schools or to contract for public school services. Synonyms are "local basic administrative unit" and "local education agency."*

School year: The 12-month period of time denoting the beginning and ending dates for school accounting purposes, usually from July 1 through June 30.

Science: The body of related courses concerned with knowledge of the physical and biological world and with the processes of discovering and validating this knowledge.

Secondary school: A school comprising any span of grades beginning with the next grade following an elementary or middle-school (usually 7, 8, or 9) and ending with or below grade 12. Both junior high schools and senior high schools are included.

Social and behavioral sciences: A group of scientific fields of study which includes anthropology, archeology, criminology, demography, economics, geography, history, international relations, psychology, sociology, and urban studies.

Social studies: A group of instructional programs that describes the substantive portions of behavior, past and present activities, interactions, and organizations of people associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes.

Socioeconomic status (SES): For the High School and Beyond study and the National Longitudinal Study of the High School Class of 1972, the SES index is a composite of five equally weighted, standardized components: father's education, mother's education, family income, father's occupation, and household items. The terms high, middle, and low SES refer to the upper, middle two, and lower quartiles of the weighted SES composite index distribution.

Staff assignments, elementary and secondary school:

District administrators: *The chief executive officers of education agencies (such as superintendents and deputies) and all others with district-wide responsibility. Such positions may be business managers, administrative assistants, coordinators and the like.*

District administrative support staff: Those personnel that are assigned to the staffs of the district administrators. They may be clerks, computer programmers and others concerned with the functioning of the entire district.

Guidance counselors: Professional staff whose activities involve counseling with students and parents, consulting with other staff members on learning problems, evaluating the abilities of students, assisting students in personal and social development, providing referral assistance, and working with other staff members in planning and conducting guidance programs for students.

Instructional (teacher) aides: Those staff members assigned to assist a teacher with routine activities associated with teaching (i.e., those activities requiring minor decisions regarding students, such as monitoring, conducting rote exercises, operating equipment, and clerking). Volunteer aides are not included in this category.

Librarians: Staff members assigned to perform professional library service activities such as selecting, acquiring, preparing, cataloging, and circulating books and other printed materials; planning the use of the library by students, teachers and other members of the instructional staff; and guiding individuals in their use of library books and materials, which are maintained separately or as part of an instructional materials center.

Other support services staff: All staff not reported in other categories. This group includes media personnel, social workers, data processors, health maintenance workers, bus drivers, security cafeteria workers, and other staff.

School administrators: *Those staff members whose activities are concerned with directing and managing the operation of a particular school. They may be principals or assistant principals, including those who coordinate school instructional activities with those of the local education agency (LEA) and other appropriate units.*

Stopout: *(See dropout).*

Tax expenditures: Losses of tax revenue attributable to provisions of the federal income tax laws that allow a special exclusion, exemption, or deduction from gross income or provide a special credit, preferential rate of tax, or a deferral of tax liability affecting individual or corporate income tax liabilities.

Technical/professional fields: A group of occupationally oriented fields of study, other than engineering and computer science, which include agriculture and agricultural sciences, architecture, business and management, communications, education, health sciences, home economics, law, library and archival sciences, military sciences, parks and recreation, protective services, and public affairs.

Total expenditure per pupil in average daily attendance: Includes all expenditures allocable to per pupil costs divided by average daily attendance. These allocable expenditures include current expenditures for regular school programs, interest on school debt, and capital outlay. Beginning in 1980-81, expenditures for state administration are excluded and expenditures for other programs (summer schools, community colleges, and private schools) are included.

Tuition and fees: A payment or charge for instruction or compensation for services, privileges, or the use of equipment, books, or other goods.

Type of higher education institutions:

4-year institution: An institution legally authorized to offer and offering at least a 4-year program of college-level studies wholly or principally creditable toward a baccalaureate degree. In some tables a further division between universities and other 4-year institutions is made. A "university" is a postsecondary institution which typically comprises one or more graduate professional schools. (See also University.)

2-year institution: *An institution legally authorized to offer and offering at least a 2-year program of college-level studies which terminates in an associate degree or is principally creditable toward a baccalaureate degree.*

Undergraduate students: Students registered at an institution of higher education who are working in a program leading to a baccalaureate degree or other formal award below the baccalaureate such as an associate degree.

Unemployed: Civilians who had no employment but were available for work and (1) had engaged in any specific jobseeking activity within the past 4 weeks, (2) were waiting to be called back to a job from which they had been laid off, or (3) were waiting to report to a new wage or salary job within 30 days.

University: An institution of higher education consisting of a liberal arts college, a diverse graduate program, and usually two or more professional schools or faculties and empowered to confer degrees in various fields of study.

Urbanicity: In the Schools and Staffing Survey school administrators are asked to describe the community in which their school is located. The results are summarized in four variables:

Rural/farming—A rural or farming community.

Small city/town—A small city or town of fewer than 50,000 people that is not a suburb of a larger city.

Suburban—A suburb of a medium-sized city (50,000–100,000 people), large city (100,000–500,000 people), very large city (over

500,000 people), a military base or station, or an Indian reservation.

Urban—A medium-sized, large, or very large city.

Vocational education: Organized educational programs, services, and activities which are directly related to the preparation of individuals for paid or unpaid employment, or for additional preparation for a career, requiring other than a baccalaureate or advanced degree.

Work-study: *A generic term for programs designed to provide part-time employment as a source of funds to pay for postsecondary education as well as a federal program that is administered through postsecondary institutions.*

Year-round, full-time worker: One who worked primarily at full-time civilian jobs for 50 weeks or more during the preceding calendar year.

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Projections of Education Statistics to 2002
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